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ABSTRACT

A comprehensive career education project in Maine was conducted on three levels: university/college-based activities; public school activities, K-12; and state department-based activities. The major objective for level I was to demonstrate to teacher educators and teacher trainees the philosophy, methods, and objectives of comprehensive career education. The major objective for level II was to demonstrate a comprehensive, integrated, and coordinated career education program in one local pilot school system (Bangor, Maine). The major objective for level III was to demonstrate procedures for initiating a Maine State Plan for Career Education. (Activities on each level are summarized by sub-objectives in this final performance report.) Evaluation plans for the public school activities utilized a pre- and posttest control group design. Several instruments were used to measure K-12 students' self-awareness, career awareness, educational awareness, decision-making skills, and appreciations and attitudes. The statistical treatments used to analyze the data were analysis of covariance, variance, and t-tests to determine if there were significant differences between the control and experimental classes (intact classes were the analysis units). (The evaluation plan is described in detail in this document; overall evaluation results are reported in CE 019 321.) Numerous related materials are appended. (EM)

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ED166360

Comprehensive Career Education
G007502355

University of Maine
College of Education
Orono, Maine

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Final Report
1975-76

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DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
WASHINGTON, D.C. 20202

CAREER EDUCATION PROGRAM

PARTICIPANT SUMMARY

NOTE. Participants include those DIRECTLY served by the project or, in the case of most parents and persons in the business/labor/industry community, who actively assist in project implementation. "Actively assist" includes efforts such as serving as resource persons, serving on Advisory Groups, providing work experience, etc.

FORM APPROVED
OMB NO. 51-R1187

NUMBER OF PARTICIPANTS (use NOTE above) WHO ARE	RACE/ETHNICITY (all Participants including Handicapped, Gifted and Talented, and Low Income)						OF THE TOTAL (column 6) NUMBER WHO ARE			OF THE TOTAL (column 6) NUMBER WHO ARE	
	AMERICAN INDIAN OR ALASKAN NATIVE (1)	ASIAN OR PACIFIC ISLANDER (2)	BLACK/ NEGRO (3)	CAUCASIAN/ WHITE (4)	HISPANIC (5)	TOTAL (sum of columns (1) through (5)) (6)	HANDICAPPED (7)	GIFTED AND TALENTED (8)	LOW INCOME (9)	MALE (10)	FEMALE (11)
STUDENTS											
ELEMENTARY (K-6)				315		315	21	13	85	154	161
MIDDLE/JUNIOR HIGH (7-9)	1		1	1112		1114	15	44	300	546	568
SENIOR HIGH (10-12)				626		626		25	169	306	320
2-YEAR COLLEGE											
4-YEAR COLLEGE				13		13	0	0	0	6	7
ADULTS (non-matriculated)											
SUB-TOTAL				2066		2068	36	82	554	1012	1056
EDUCATIONAL PERSONNEL											
TEACHERS				140		140				65	75
COUNSELORS				8		8				4	2
ADMINISTRATORS				6		6				6	0
MEMBERS OF THE BUSINESS/ LABOR/ INDUSTRY COMMUNITY				55		55					
PARENTS				0		0					
OTHER (specify) State Dept. Staff				3		3					
TOTAL				2278		2280					

OE FORM 467, 2/76

CAREER EDUCATION PROGRAM

1. Project No.:	2. Grant No.:	3. Nature of Report:
554A50079	G007502355	___Semi-Annual _X_ Final

4. Project Title:	5. Period Covered By This Report:
Comprehensive Career Education Project	From: 7/1/75 To: 6/30/76

6. Category of Project (as specified in 45 CFR 160d.5 and 160d.11):

_X_ Incremental ___ Settings ___ Populations ___ Training ___ Communications ___ State Plan

7. Name of Project Director: Dr. Charles W. Ryan

8. Name and Address of Grantee/Assistance Contractor Institution	Telephone	
	Area Code	Number
University of Maine Orono, Maine 04473	207	581-7463

9. Major Activities:

To facilitate review of this final performance report for each major section of the Comprehensive Career Education Project all objectives for the three levels were reviewed and appropriate support data provided. Where feasible, sample project materials are appended. The project objectives are inserted for ease in reviewing and linking the major accomplishments to each activity. All project activitities were subjected to summative review by the staff to ascertain the status and degree of accomplishment for each objective. A concerted effort for brevity without sacrificing a qualitative review of our efforts guided the compilation of this report. The third party evaluation team from the Center for Vocational-Technical Education, the Ohio State University reviewed a preliminary report on June 3-4, 1976 and

provided comment prior to final preparation (See Appendix A). The report is divided into three sections for ease in responding to objectives within each level.

LEVEL I - UNIVERSITY BASED ACTIVITIES

The major objective for Level I was to demonstrate to teacher educators and teacher trainees the philosophy, methods, and objectives of comprehensive career education. A review of each subobjective for Level I indicates the following accomplishments:

Subobjective 1: Train 100 teacher educators within the University system in the philosophy, objectives and content of career education.

A series of three one-day workshops, conducted by Dr. Charles Ryan, was undertaken as the most efficient means of reaching teacher educators throughout Maine. Three University of Maine campuses were selected for each training session in order to minimize travel for all participants: Portland-Gorham for the southern area of the state; Orono for the central section; and Presque-Isle for the northern region.

Fifteen colleges and universities involved in the training of teachers were identified. A letter was written to either the Dean of the College or Chairman of the Department asking him or her to nominate a team of faculty members to attend the workshops. A schedule and outline of the workshops and information on the Comprehensive Career Education Project were enclosed (see Appendix B and C). Responses were received from seven institutions resulting in thirty-eight registrations for the workshop series.

The response rate did not reach one-hundred as a result of several factors. The heavy Fall semester teaching load at each University of Maine campus limits the amount of time available for workshops held during the week. Also, in many cases, the faculty member nominated by the Dean failed to take any action. If this workshop series were to be offered again, an effort would be made to contact faculty members at each college/university in the system who were already committed to career education. In this way, we

would hope that they would recruit interested colleagues to participate. Comments by many of the participants, indicated that previously scheduled classes and "emergency" meetings on budget problems precluded their attendance. For those who did agree to participate, we noted that sporadic attendance was a consistent behavior pattern. For many university professors in the University of Maine system, career education is not a top priority. Faculty members did not receive salary increases in 1975-76 and the criteria for promotion has increasingly emphasized publication. With these two variables acting as deterrents to volunteering for "extra" training, the enrollment of thirty-eight was accepted as a successful beginning. The core group of thirty-eight participated in the three all-day seminars to varying degrees. As mentioned above, their attendance was often interrupted by "crises" on campus that required immediate attention.

The first session took place in early November and was entitled: "Career Education: What It Is and What It Can Be."

Sub-Topics:
A. Historical Antecedents of Career Education
B. A Rationale for Career Education
C. A Contemporary Definition of Career Education
D. Legislative Influences on Career Education
E. Team Planning by Discipline
(Strategies for Integrating Career Education Concepts and Techniques Into the College Curriculum)

At the beginning of the meeting, the Career Knowledge Inventory which had been administered to the Bangor Public School teachers in Level II of the project was administered. The university teacher educator results are reported in the evaluation section.

Participants at the first workshop were encouraged to bring guests to the second workshop and total attendance at the second session, "How to Implement Career Education," was sixty. Project staff from South Portland Public Schools, S.A.D. 51 Cumberland Center and the Career Placement Center, U.M.O. demonstrated activities of their education programs.

The third session scheduled for late January, 1976 focused on "Future Trends and Directions in Career Education" and thirty teacher educators attended this session. One of the major topics discussed was expanding alternatives for teacher education students via career education. In addition, each participant responded to a workshop evaluation instrument (see Appendix D) prepared by project staff. It is expected that the evaluation data will be useful in planning future workshops for university faculty. The data from these evaluations have been analyzed and are summarized in the evaluation section.

To provide consultant assistance in the third session, arrangements were made to have professional personnel with outstanding experience in career education in higher education serve as resource persons. After consulting with Mr. Harry Drier, Research and Development Specialist at the C.V.T.E., the Ohio State University, the following persons were contracted to deliver specific services:

1. Dr. Richard Libby
   Career Education Consultant
   Professor of Education, Vocational-Technical Education
   Iowa State University
   Topic: "Career Education Cadres in Higher Education"

2. Dr. Robert Ristau
   Professor of Education
   Eastern Michigan University
   Topic: "Infusing Career Education on Campus"

3. Dr. Robert Weishan
   Educational Consultant
   Personnel Development Unit
   Topic: "Career Education in Higher Education"

The decision not to administer a post-test to the teacher educators was based on the difference in workshop content. The teacher educators were exposed to career education concepts

in a total of eighteen instructional hours and their content was limited to the topics listed in Appendix C. A post-test would not measure accurately the differences between the Bangor Teachers and the Teacher Educator group because the instructional content varied.

A summary of teacher educator comments was compiled from each of the sessions. The following reflect the concerns raised by this group concerning career education and higher education.

1. How does career education relate to career preparation and planning on the campus?

2. Will colleges/universities be forced to introduce or develop programs of career education?

3. How does career education apply to differing institutions, i.e., liberal arts colleges vs. state universities?

4. Does career education provide for older adults and how is this to be infused in the post-secondary institution?

5. What priorities can be established from career education to guide university program development? For example, should we focus on self awareness or decision making?

6. How does career education help students with unrealistic aspirations in relation to their abilities?

7. Will there be additional federal funds to assist universities in the in-service training of staff and faculty?

Subobjective 2: Train fifteen teacher trainees in career education philosophy, etc.

Recruitment of the undergraduate career education interns began in late September and applications were sought by means of announcements by U.M.O. College of Education faculty in their classes, advertisement in the campus newspaper and an announcement sent to all education majors who were student teaching off-campus at that time. The selection criteria were a G.P.A. of 2.0, and junior or senior standing (See Appendix E).

Interested students were requested to submit a written application which included a brief statement of why they wished to take part in the project and a transcript of courses. Fourteen applications were received. Eight students were chosen on the basis of their applications alone and six students who were considered questionable (due to deficiencies in course work or questions about G.P.A.) were interviewed by either Dr. Ryan or Dr. James Miller, the co-director of the Project. Those students that were selected performed very well, almost without exception. Of those students with low G.P.A. we received outstanding reports from the Bangor teachers for both cooperation and planning. The one intern that proved somewhat difficult to work with had a very high G.P.A., but received less enthusiastic reviews by the Bangor staff. All fourteen applicants were accepted and notified in early November.*

The Career Education Knowledge pre-test was not administered at this time but was administered on January 28, 1976 to the interns at the second class session of Ed C 154. The post-test was administered on May 5, 1976. Results are presented in the evaluation section.

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*Note: One intern resigned due to accepting a teaching position.

The interns registered for Ed C 154 Career Education: The Secondary School (3 credits) and Ed X 198 Problems In Education (3 credits) during the Spring semester. The field experience involved work in classrooms in the Bangor School System with teachers from Level II of the project. Drs. Ryan and Miller coordinated the training of these students.

The population from which the interns were recruited numbered between 400 to 450 students. This is the number of students who were involved in student teaching and enrolled in methods courses during the Fall semester, 1975. Initially, we expected more response from juniors but this was not the case as a result of the heavy course load carried by these students during the Spring semester. Thirty-six applications were requested and an additional nine students talked with a member of the project staff regarding the nature of the experience. From the forty-five students, many decided that they did not have room in their schedules for the three credits of field experience which could not be substituted for their student teaching. The response rate for this population was inadequate in our opinion and suggests a more comprehensive procedure is needed. In the future it should take place at the beginning of the Fall semester before education majors have left campus for their student teaching assignments and before they plan their academic schedule for both Fall and Spring semesters.

Subobjective 3: Define the role of the university/college in career education.

This objective is being accomplished in several ways. One means is through the workshops with teacher educators. Active participation was encouraged to elicit the views of university/college faculty throughout the state. The project staff maintained a log of the major questions raised and reviewed the major concerns of teacher educators at the end of the workshops. For example, the focus for most of the concerns voiced by the teacher educators

has been the declining job market for their students. There has been some attempt to raise the issue of how one reconciles this economic reality with the role of teacher-education. In addition, staff cutbacks and increasing concern over Full Time Enrollment figures has increased the pressure for survival in a tenuous academic labor market. Additional comments have been summarized in Appendix F.

A second procedure is through continuing staff self-evaluation. The four counselor trainees were encouraged to share their concerns about the project and their course work. Semi-monthly staff meetings are the major vehicles for the airing of such problems. The counselor trainees not only worked together on the project, but also shared similar programs of study during the Fall semester, e.g., all four took Career Education: The Elementary School and Introduction to Career Development Theory. The Fall semester was seen as the vehicle for training the counselor trainees so that they could be most optimally helpful to the Bangor Staff in the Spring. Other duties assigned the trainees were:

1. Review career education curriculum materials.
2. Participate in pre-testing as test proctors.
3. Visit other career education projects, e.g. South Portland Project REVAMP.
4. Assist in the in-service training program for Bangor teachers, e.g., preparation of an occupational cluster learning packet.
5. Prepare all tests for key punching and data analysis.
6. Prepare and analyze test data.
7. Supervise budget analysis.

Another means of defining the role of the university/college in career education was evaluation of the undergraduate intern program by the project staff and the supervisory teachers in Bangor.

It was expected that this initial field experience for teacher trainees would be a basis for field experiences offered by the College of Education outside of the Comprehensive Career Education Project. Each of the undergraduate interns was required to observe and participate in the planning of career education exercises in grades K-12.

In essence, most of the comments from teacher educators, undergraduate interns, and the counselor trainees suggest the following as key activities for university-based career education:

1. Provide in-service training for the staff.
2. Development of self-instructional materials for faculty who cannot attend all training sessions.
3. Provide formal course work and related field experience for both graduate and undergraduate students.
4. Coordinate campus-based career education from a central location for continuity and direction. Seminars, courses, special events, proposal development and policy making must be the responsibility of at least one high level official.
5. Work closely with local secondary schools for field testing of new materials and training of teachers.

Subobjective 4: Review career education literature, research models, and State exemplary project with teacher educators.

This objective has been accomplished through our workship series for teacher educators and through Ed C 153, Career Education: The Elementary School and Ed C 154 Career Education: The Secondary School. Representatives from South Portland Project REVAMP, and S.A.D. 51, Project Geographically Isolated Vocational Education, for instance, demonstrated their projects. In the career education courses, model curricula was presented to the interns which included

several teacher educators and the four counselor trainees. A variety of career education materials have been purchased or received from other career education projects and are housed in the resource centers located at Harlow Street School and the College of Education. The four counselor trainees and the professional staff have reviewed this material. The materials were available to all Ed C 153 and Ed C 154 class members for review and use. A continual effort was made to acquire career education materials that relate to the following elements:

1. Appreciations and Attitudes - few materials available.
2. Economic Awareness - limited materials, mostly Joint Council on Economic Education publications.
3. Educational Awareness - materials are heavily guidance oriented, few for the classroom teacher.
4. Employability Skills - few materials available.
5. Beginning Competency - few materials available.

All thirty-five Bangor participants have used the Career Resource Center materials. Many of them on a continuous basis and the requests for help have increased. The teacher educators and interns have made greater use of the on-campus facility to date.

Subobjective 5: Arrange visits to observe demonstrations of career education methods in selected Maine schools.

South Portland Project REVAMP was visited by project staff twice during the Fall semester. S.A.D. 51, Greeley-Cumberland, Maine; Noble High School, Berwick, Maine; and S.A.D. 31, Howland, Maine have also been visited by members of the project. Additional visits were not possible for one major reason, these sites are the only identifiable career education efforts that have substance and form at this time. Reports of the activities observed were

presented at the bi-monthly staff meetings and project members are encouraged to visit career education programs which might be of particular interest to them. As a result of these visits, several changes were made in the delivery of career education to teachers and teacher educators. For example:

1. The materials in the Career Resource Center at Harlow Street School are being cataloged and a list prepared for all teachers.
2. The demonstrations arranged for the teacher educators were related to specific career education elements, e.g., Self Awareness, Career Awareness and Decision-Making.
3. A procedure for more detailed record keeping was initiated after reviewing the South Portland Project REVAMP System.
4. More demonstrations on "How To Do It" were arranged for the Bangor teachers as a result of the visit to Project REVAMP.
5. "Shadow" experiences were arranged for the Bangor Teachers to increase their knowledge of employment opportunities in local public agencies.
6. Several panels were presented to the teachers per their request to meet and discuss with local business personnel the problems of youth.

Subobjective 6: Train four counselor trainees in career education philosophy, objectives, and content and provide a field-based experience prior to graduation.

The four counselor trainees took Ed C 153, Career Education: The Elementary School; Ed 255, Introduction to Counseling and Ed 351, Career Development Theory, during the Fall semester. Additional course work was to include Career Education: The Secondary School; Educational-Occupational Information and either a practicum or apprenticeship in career counseling. The individual programs for each of the trainees was somewhat varied to accomodate

the needs and levels of proficiency of each intern. It was decided during individual interviews with each trainee at the end of the Fall semester that, as a result of the exposure to the concepts of career education, some of the counselor trainees would prefer to devote their energies to other disciplines. For example, one of the trainees has decided to work with career education from a community development point of view and is taking two courses in principles and practices of community development.

In addition to formal course work, the counselor trainees participated in the workshops for both the Bangor teachers and the teacher educators. They have also devoted considerable time to review of curriculum materials and research models, preparing critiques of such material for the use of other project staff.

During the Spring semester, there were two graduate assistants working with the project. Their major responsibilities centered on evaluation procedures and data analysis. The time commitment of twenty hours per week was deemed too demanding by three of the original four trainees since their course work involved about twenty hours per week in apprenticeship activities and they had made substantial changes in their career goals. This problem of a conflict in time commitment was not anticipated at the beginning of the project, as it was assumed that the trainees would take their apprenticeship during the summer when they were not involved with the project. Also, because of changes in career goals for three of the four original trainees it was appropriate that they resign their appointments. The decision was made to not replace two of them because of the difficulty of integrating new students into the Bangor School System midway in the project. A replacement with experience in data analysis was chosen to fill one of the three terminated assistantships for the Spring term.

In our view, the use of first-year graduate students in a project that concentrates heavily on training university professors and experienced public school teachers may not be valid. Today's graduate student may resent being assigned low level tasks and activities as a prelude to more scholarly endeavors. In reality, our project was a nine month effort that began in September and started phasing out in May, 1976. The time to conduct an intensive recruitment campaign was not available and the screening adequate at best. Everything connected with our three major levels had to "begin" at once and a slow, leisurely integration of the trainees was not possible. We suspect that being assigned to the Bangor School system was never really accepted by two of the trainees, particularly since they were so anxious to leave the public school as stated in pre-selection interviews. Also, the trainees were receiving training in basic career education concepts and being asked to provide technical assistance to the Bangor Teachers at the same time. This proved to be disconcerting and undoubtedly contributed to their ambivalence regarding actual role and function in the project. One final area of concern was their relationship with the Career Education Coordinator hired by Bangor. Three of the trainees were attending Ed C 154 Career Education: The Elementary School in the Fall and the Bangor Coordinator was also enrolled. We suspect that a peer relationship developed which was to interfere with their work efforts at a later date.

LEVEL II - LOCAL EDUCATION AGENCY

The major objective for Level II was to demonstrate a comprehensive, integrated and coordinated career education program in one local pilot school system. The following narrative describes and reports on the activities as they relate to the project objectives.

Subobjective 1.1: Demonstrate a comprehensive career education model for teachers in grades K through 12.

Orientation and Recruitment of Teachers - A series of meetings were held in September, 1975 to orient all Bangor teachers to the project. Copies of the Comprehensive Career Education Project brochure and an invitational letter explaining the purposes of the workshops and how to apply for participation were mailed to all Bangor teachers. The career education consultant offered to speak with individuals or groups of teachers at all schools and was invited to speak about the project to four elementary schools, one junior high school and Bangor High School. Forty-eight teachers and guidance counselors submitted applications and were involved in a general, informational meeting conducted by the career education consultant. Based on representation from building, grade level, and subject area, the Bangor School Administration selected thirty-five participants, thirty-one teachers and four guidance counselors (See Appendix G).

During the latter part of September, the thirty-five selected teachers were oriented to the project through an introductory workshop. Participants were informed of the project goals and objectives on each of the three administrative levels of the project. South Portland personnel from Project REVAMP presented an overview of their project to the Bangor participants. In addition, project evaluation techniques were reviewed with the participants. Small group interaction sessions were organized involving South Portland and Bangor teachers and counselors. The orientation workshop culminated with a field trip to the Bangor Daily News.

Needs Assessment - Concurrent with the selection of project participants, the Bangor Career Education staff began its survey of teacher and community needs. Considerable data existed from a previous survey conducted in the Spring of 1975 by the thirteen-member Bangor Career Education Curriculum Committee. This survey showed clearly that teachers lacked: (1) understanding of the goals of career education; (2) a systematic approach for implementation of career education concepts and principles; (3) career education curriculum materials for students as well as for themselves; (4) community contacts for possible field trips; (5) resource persons with varied occupational backgrounds; (6) classroom activities for infusing career education elements; (7) career exploration activities for classroom use; and, (8) knowledge of materials available in Career Education.

Because the Bangor City Schools were undergoing a comprehensive state of Maine self-evaluation program in 1975-76, school administrators were reluctant to conduct further needs assessment of teachers. The data collected in the self-evaluation program will be made available to Career Education project staff in the summer of 1976 and will be utilized in planning activities for the 1976-77 school year.

Sufficient data existed from earlier community surveys and no new data were collected. Several recent community surveys were available from the Maine Employment Security Commission, Bangor Economic Development Department, Southern Penobscot County Cooperative Board, and the Department of Development, Research, and Planning, City of Bangor.

The data from the community surveys listed above were voluminous, but some of the key findings which were particularly significant to the project are:

1. Incongruence of basic skills taught in the schools and job needs.
2. Obsolescence of traditional Maine industries (e.g., shoe and textile require that new skills be included in the school curriculum).
3. Changing work ethic and its impact on local and state business/industry.
4. The Bangor International Airport offers an excellent opportunity for serving as a Free Trade Zone on the East Coast. Should this become a reality, many new jobs would become available to Bangor citizens.
5. Maine's absolute advantage as well as comparative advantage in the paper industry suggest that capital investment in this industry will continue to be high and that concomitantly, new and highly specialized job opportunities will become available to Maine youth.
6. While Maine has lagged behind many other states in the development of vocational education programs, recent expansion in this area has increased the training options for students in Maine.
7. Industries which have recently located in Bangor (GT Sylvania, Westinghouse) require new labor skills.

In-Service Activities - Eleven highly successful full-day workships and one visitation to the South Portland Career Education Program were conducted. In addition, all project teachers participated in a one-day job shadowing experience and three field-trips to local businesses and industry.

Eight of the eleven workshops focused on one of the eight career education elements. The format for each of the workshops was as follows: one hour of theoretical background related to the selected element by a university professor; one hour of discussion and/or

activity related to the presentation; and a two hour laboratory session by South Portland staff to demonstrate career education classroom activities by grade and subject-matter areas. A total of 108 South Portland classroom teachers, representing every grade level and academic area participated in the workshops. The afternoon workshop sessions varied according to participant needs and interests, but included teacher preparation time, field trips, and panel discussions (See Appendix H Workshop Schedule).

In-class assistance was provided to participants, upon request, by members of the project staff. Assistance also included providing resources, leading self-awareness experiences, leading discussions, showing filmstrips, and demonstrating simulation gaming. In total, thirty-three of the thirty-five participants were provided with assistance beyond the workshops.

Chart 1 indicates the number of career education activities conducted by project teachers from October 1975 to the conclusion of the project in May, 1976. Since these data will be discussed and analyzed in detail under Objectives 1.2, 1.3, and 1.4, it is sufficient to point out that the project teachers did, in fact, conduct a significant number of classroom activities related to the eight career education elements and that this activity increased dramatically as the project progressed.

Finally, on June 14 a half-day workshop was given for 380 Bangor school staff on highlights of the Bangor Comprehensive Career Education Project. The workshop consisted of: (1) a slide presentation of activities which occurred in the experimental career education classrooms; (2) the dissemination and distribution of the Career Education Handbook (See Appendix I) developed by the project staff; (3) teacher participation in selected career education activities; and (4) future plans for Career Education in the Bangor schools.

CHART 1

Summary of Career Education Activities Conducted by 31 Project Teachers,
October, 1975 through May, 1976

Career Education Element		Grade Level K-6	7-9	10-12
Self-Awareness	Number of Activities	100	47	80
	Number of Students	1278	578	809
Career Awareness	Number of Activities	87	73	22
	Number of Students	873	885	561
Educational Awareness	Number of Activities	58	13	44
	Number of Students	278	173	247
Economic Awareness	Number of Activities	29	17	12
	Number of Students	243	204	227
Beginning Competencies	Number of Activities		14	7
	Number of Students		189	63
Employability Skills	Number of Activities	5	3	34
	Number of Students	22	21	249
Appreciations & Attitudes	Number of Activities	51	25	42
	Number of Students	268	526	349
Decision Making	Number of Activities	12	8	3
	Number of Students	139	120	40

Number of Teachers: K-6 - 14
7-9 - 11
10-12 - 6

Activity = one classroom period. In the Bangor School System, these periods range from 20 minutes to 40 minutes in length.

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Community Involvement - In addition to providing members for the Project Advisory Committee, the Bangor business and industrial community were very supportive of the project. The business and industrial community, without exception, cooperated in hosting field trips and participating in workshop activities (e.g., panel discussions, speakers, etc.). Further Bangor City officials were equally cooperative with the career education staff in planning and providing experiences for the project teachers. For example, Mr. Jack Perry, Personnel Manager, Bangor City Government, enthusiastically arranged for the placement of the 35 participants in a job shadowing experience with city workers. In addition, the community media cooperated in giving visibility to the project. Workshops were publicized in fourteen television newscasts ranging from central to northern Maine and in two articles, including a photograph in the Bangor Daily News.

Teacher Demonstrators - Ten project teachers were selected and trained in leadership skills as career education demonstrators. In addition to their involvement in the schools, six of the teachers presented sample classroom activities at a clinic at the Northeastern Regional meeting of the National Council for the Social Studies in Boston on April 2, 1976. Three other teachers made presentations at the South Portland meeting of the Association for Supervision and Curriculum Development. Two teachers, including one identified above, made presentations on career education at the National Elementary Guidance Conference, June 30, at the University of Maine at Orono.

The demonstration teachers were selected on the basis of their enthusiasm for career education and their willingness to present ideas to their colleagues, as well as the quality of career education activities in their classrooms.

Workshop Evaluations--Appendix J contains sample evaluations of the workshop participants. To reduce the content of this report without destroying objectivity, it was decided that the first three teacher (alphabetically) evaluations would be included. A summarization of the comments of all participants concerning the individual workshops, as well as the final workshop evaluation follows:

1. The participating teachers stressed that a most important part of the workshops was the presentation of specific, practical career education ideas, materials and activities by the staff members and the participants from South Portland School Department. They were impressed by the presentations and the small group discussion that stressed "hands-on" activities.

2. The participating teachers were very impressed with the sessions dealing with community contact. Panel discussions involving business people, job shadowing experiences and local educational and business field trips were well received by the workshop teachers.

3. Concerning future workshops sessions and suggestions for improvement, the participating teachers suggested the following:

   a. Additional discussion and development of career education techniques, ideas, materials and activities K-12.

   b. Demonstrations and visitations at on-going career education projects outside of the Bangor School system.

   c. Additional contact with the local business community regarding panel discussions, job shadowing and field trips.

   d. Continuation of a career education resource center and the continued employment of a career education consultant - coordinator. Teacher comments in this area stressed the need for a centrally controlled resource center where help and career education resources would be available to all teachers.

   e. Most participating teachers indicated that as a result of the workshops, they did plan and implement career education activities into their individual courses.

4. As a result of the career education project the workshop participants indicated development of beginning competencies in the following areas and/or skills:

   a. an awareness and understanding of the elements of career education

   b. an awareness and understanding of the techniques of interviewing, field trips, job shadowing, values clarification and use of community resources

   c. an awareness and understanding of the concept of curriculum infusion

5. Concerning the participants' knowledge and feelings concerning career education prior to the project, most teachers had varied views. Some of the commonly mentioned teacher comments were as follows:

   a. We felt career education was for the upper grades only.

   b. We did not understand the principles of career education.

   c. We did not know how to infuse it in our classrooms.

   d. We had career education confused with vocational education.

6. As a result of the project, all teachers expressed a positive feeling toward career education and indicated a desire to see career education continue as an on-going project in Bangor. All felt they had gained competencies in career education and expressed a desire to see career education infused into the curriculum of the Bangor Schools.

7. Concerning the participants' future plans for career education, the following were mentioned:

   a. All participants expressed a desire to infuse career education elements and activities into their particular courses next year.

   b. Most participants indicated that they would make increased use of community resource people, parents, field trips and job shadowing.

   c. Most participants expressed a desire to see the establishment of a central career education resource center or individual school resource center or both.

d. Many participants expressed a desire to see career education elements infused into the guidance program as well as the curriculum.

e. Several participants expressed a desire to pursue additional training in career education courses at the university and in career education workshops if they are available.

5. The participants suggested the following with regard to an in-service training program for next year:

a. All suggested the training of a new group of teachers.

b. Many suggested a more intensive training for this year's group of teachers.

c. Use this year's group of teachers as resource people and workshop staff members next year.

d. Make continued and additional use of the community regarding panels with local business people, job shadowing, field trips.

e. The possiblity of a career guidance institute made up of teachers from this year's group.

Subobjective 1.2: Demonstrate career education curriculum practices for infusing traditional subject matter.

It was mentioned earlier that the thirty-one teachers selected for the project represented all grade levels and major academic areas. Further, a list of the teachers and their grade level/academic area was provided in Appendix G.

In this section we will explain how the infusion process was initiated and nurtured. Secondly, we will evaluate the degree of infusion of the eight elements of career education into the traditional subject matter taught by the participants.

Workshop Activities for Infusion -- Each workshop focused on one of the eight elements of career education and followed the format described in 1.1. The South Portland teachers, meeting in small groups, provided the Bangor participants with materials and infusion strategies. The afternoon sessions were devoted largely to participant preparation of lessons centering on the element that had been dealt with in the morning session. Two sessions were spent early in the project on writing behavioral objectives, activity selection to achieve such objectives, and measurement strategies for assessing achievement of such objectives.

The career education coordinator and staff provided teachers with assistance in activity planning in the afternoon sessions. In addition, the career education consultant provided participants with continuous information on the career education materials in the Resource Center.

The participants were required to maintain a log of career education activities which they had completed in their classrooms.

Analysis of Infusion -- Chart 1 summarizes the career education activities conducted by the teachers for the period October, 1975 through May, 1976. The chart provides data concerning the element which was infused, the number of activities related to that element, and the number of students impacted by the activity, as well as a grade level breakdown.

In analyzing chart 2 and 3, several observations about the infusion process are in order:

1. There appears to be a direct relationship between the time sequence of the introduction of the element in the workshops and the infusion of classroom activities related to that element. For example, the self-awareness and career awareness elements were presented early in the project and a significant number of related activities were infused in October-December, 1975, in the classroom. On the other hand, only three educational awareness activities were listed by teachers in the same time frame. But in the time period of January-May, 1976, the period in which the educational awareness element was introduced in a workshop, 112 educational awareness activities were logged by the project teachers.

2. The paucity of decision-making activities may be attributable to the lack of time between the workshop presentation and the tabulation of teacher log data, since decision making was the last element presented. It may also be due to the pervasive nature of decision-making. In many instances, it was difficult, for example, to isolate decision-making as the primary thrust of an activity, because several other elements were also involved.

3. More classroom activities focused on self-awareness, career awareness, appreciations and attitudes, and educational awareness than any of the other four elements.

In relation to the brief time period given to the project, the project staff feels that degree of infusion was remarkably high and

CHART 2

Summary of Career Education Activities Conducted by 31 Project Teachers,

October - December, 1975

Career Education Element		Grade Level K-6	7-9	10-12
Self-Awareness	Number of Activities	51	12	21
	Number of Students	1101	295	583
Career Awareness	Number of Activities	33	24	12
	Number of Students	649	514	329
Educational Awareness	Number of Activities	1	2	
	Number of Students	15	30	
Economic Awareness	Number of Activities	4	2	1
	Number of Students	78	30	14
Beginning Competencies	Number of Activities		1	
	Number of Students		49	
Employability Skills	Number of Activities		1	
	Number of Students		4	
Appreciations & Attitudes	Number of Activities	4	6	9
	Number of Students	75	196	210
Decision Making	Number of Activities		1	1
	Number of Students		6	9

Number of Teachers: K-6 - 14
7-9 - 11
10-12 - 6

Activity = one classroom period. In the Bangor School System, these periods range from 20 minutes to 40 minutes in length.

CHART 3

Summary of Career Education Activities Conducted By 31 Project Teachers

January - May, 1976

Career Education Element		Grade Level K-6	7-9	10-12
Self-Awareness	Number of Activities	49	35	59
	Number of Students	177	283	226
Career Awareness	Number of Activities	54	49	11
	Number of Students	224	371	232
Educational Awareness	Number of Activities	57	11	44
	Number of Students	163	143	247
Economic Awareness	Number of Activities	25	15	11
	Number of Students	165	174	213
Beginning Competencies	Number of Activities		13	7
	Number of Students		140	63
Employability Skills	Number of Activities	5	2	34
	Number of Students	22	17	249
Appreciation & Attitudes	Number of Activities	47	19	33
	Number of Students	193	330	139
Decision Making	Number of Activities	12	7	2
	Number of Students	139	114	31

NUMBER OF TEACHERS: K-6 - 14
7-9 - 11
10-12 - 6

ACTIVITY = one classroom period. In the Bangor School System these periods range from 20 minutes to 40 minutes in length.

that subobjective 1.2 was fulfilled.

Subobjective 1.3: Demonstrate the implementation of career awareness activities in grades K-6.

At the K-6 level, 87 career awareness activities were conducted and 873 students were impacted as is shown on Chart 1.

Subobjective 1.4: Demonstrate the implementation of career exploratory and preparation techniques for students in grades 7-12.

Chart 1 indicates that project teachers in grades 7-12 conducted 95 career awareness activities, impacting 1,446 students; 37 employability skills' activities, impacting 270 students; and 21 beginning competencies' activities, impacting 252 students. Further, resource materials were loaned to these teachers on 216 occasions, according to records kept by the Resource Center. Finally, job shadowing experiences were provided for between 175-200 students in grades 7-12, in addition to 54 student field trips.

Subobjective 1.5: Demonstrate career guidance techniques that facilitate career education in grades K-12.

Four of the workshops were conducted by members of the Counselor Education Department, College of Education, University of Maine at Orono. Consequently, the workshops had a heavy guidance orientation. Secondly, members of the South Portland guidance staff participated in eight of the Bangor workshops. Thirdly, the entire South Portland guidance staff met with the participants during the site visitation of Project REVAMP. Lastly, Dr. Ryan, Project Director of the Comprehensive Career Education Project, met with the Bangor staff

and discussed with them the need for a systems approach for delivering guidance services in particular to their clientele.

Subobjective 1.6: Demonstrate follow-through research techniques to assess the career education growth of selected 3rd, 5th, 7th, 9th, and 10th graders over a three-year period.

The instruments used in pre-testing and post-testing participants and students are reported in the evaluation section of this report. Students in thirty-one experimental classes and thirty-one control groups were tested and these data are also analyzed in the evaluation section. A follow-up study of selected students in grades 3, 5, 7, 9 and 10 will be conducted by the Bangor career education consultant during the academic years of 1976-77 and 1977-78 to determine the project's impact on student attitude and achievement.

LEVEL III - STATE DEPARTMENT BASED ACTIVITIES

The major objective for Level III was to demonstrate procedures for initiating a Maine State Plan for Career Education. The accomplishments for this level are reported in relation to each objective as specified in the proposal.

Subobjective 3.1: Demonstrate the planning process for the State Career Education Advisory Committee.

Under the combined direction of Mrs. Marion Bagley, Consultant for Career Education, and Professor Ryan the preparation of a State Career Education Plan is making satisfactory progress. In particular, the Maine Career Education Plan has received preliminary approval from the State Board of Education. The December 11, 1975 meeting of the State Board did raise several questions that must be resolved prior to final acceptance of the Career Education Plan. It should be noted that the Career Education Plan has undergone five revisions and the State Board has reacted to Revision #4 and #5. A policy statement was adopted at the December 11th meeting which reflects support for career education -- the statement reads:

> "The Maine State Board of Education affirms its support of the concept of Career Education and directs the Department to continue its efforts in the development and the implementation of the State Plan which proposes to serve all individuals in career awareness, orientation, exploration, and preparation for work as a part of his or her way of living."

Revision #5 of the proposed State Plan for Career Education was submitted on December 11, 1975. It was not accepted for the following reasons:

1. Inadequate plan for funding of required implementation techniques.
2. Inadequate documentation of staff needs and task assignments within the State Department of Education.

At this time the State Board has suggested that additional study regarding financial needs, implementation strategies, and revision of historical background data is needed. The state level Career Education Advisory Committee has urged the career education consultant to seek federal funding to aid with this task and has met to discuss the suggested changes. In accordance with this directive, a proposal was prepared and submitted to the Office of Career Education, U.S.O.E. We have received official notification of action to accept this request for extramural funding of $43,000 (See Appendix).

Subobjective 3.2: Demonstrate a State level staff development system for identifying career education philosophy and methods.

A. Conduct State Level Advisory Committee Meetings -- the Advisory Committee was established in May, 1975 by Commissioner of Education, Sawin Millett. It is composed of fourteen members and met three full days in the Fall of 1975 to work on the State plan. The prime task assumed by this group is the writing of a Maine State Plan for Career Education and providing advice to the

career education consultant. After six months of review and analysis of career education needs in Maine, a preliminary plan was submitted on December 11, 1975 to the State Board. In terms of man hours the career education consultant devoted a total of eight workdays (eight hours) to prepare the preliminary draft of the state plan. It is anticipated that the Advisory Board will be expanded to include business, industry and labor for the next stage of state plan development. The present members are:

Dr. Charles W. Ryan, Director
Research Coordinating Unit
Bureau of Vocational Education
Dept. of Educational & Cultural Services
Augusta, Maine

Mr. Fred Douglas, Consultant
Division of Curriculum
Bureau of Instruction
Dept. of Educational & Cultural Services
Augusta, Maine

Ms. Betty L. McLaughlin, Consultant
Div. of Human Development and
Guidance Resources
Bureau of Instruction
Dept. of Educational & Cultural Services
Augusta, Maine

Mrs. Beverly Ingalls
Classroom Teacher
MSAD #75
Harpswell Island School

Mr. Gary Sullivan
Career Education Coordinator
MSAD #60
Berwick, Maine

Mrs. Marion Bagley
Career Education Consultant
Bureau of Vocational Education
Dept. of Educational & Cultural Services
Augusta, Maine

Mrs. Jean Jones, Consultant
Wage Earning Programs for Women
Bureau of Vocational Education
Dept. of Educational & Cultural Services
Augusta, Maine

Mr. Dave McCullough, Director
Division of Adult Education
Dept. of Educational & Cultural Services
Bureau of Vocational Education
Augusta, Maine

Mr. Fred Friese, Assistant Director
Career Education Project REVAMP
South Portland High School
South Portland, Maine

Mr. Graydon M. Robinson
Research/Writer
Career Resource Center
SAD #9
Farmington, Maine

Mr. Kenneth C. Gray
Director
Maine Vocational Region 10
Brunswick, Maine

Mr. Roy Bagley
Director, Project GIVE
SAD #51
Cumberland Center, Maine

Mr. John Weldon, Principal
Philip W. Sugg School
Lisbon, Maine

Mr. Richard S. Ladner, Superintendent
Box 38
Lisbon Falls, Maine

B. Develop evaluation plan - the career education consultant worked with the Maine Assessment of Educational Progress office to prepare the sixth testing program for administration in May, 1976. The focus was career education with emphasis on career awareness and occupational knowledge. A contract was awarded to National

Evaluation Systems and the testing included 1,000 students in two age groups (age 13 and 17). A total of 50 schools for each age group participated in the period May 3-14, 1976. Analysis of the results will be available in August 1976, and will be used for preparing the revised state plan for career education. The career Education Consultant participated in two proposal review sessions to select the contractor and three six-hour sessions for developing test item content.

In addition, a survey of school districts regarding their needs in career education was planned for Spring, 1976. It was decided to postpone this effort until notification was received regarding our request for funds to continue developing a state plan. On June 15, 1976 we received official notice of acceptance from the Office of Career Education, U.S.O.E.

Subobjective 3.3: Demonstrate a consultant model for State Department staff responses to school-based career education requests within each county in Maine.

The Maine Trainer's Manual for Career Education, (1974) is used as a model for conducting in-service training in public schools by request. To date, a total of forty-five requests for in-service training were received in 1975-76 and involved 380 professional educators. By adhering to the Maine Trainer's Manual for Career Education we achieved consistency and standardization in infusing career education. The following unit titles reflect essential topic coverage:

A. Career Education: Historical Antecedents

B. Career Development in the School

C. Working with Self-Concept

D. Career Education in the Elementary School

E. Career Education in the Secondary School

F. Strategies and Practices for Implementing Career Education

G. Community Involvement in Career Education

H. Career Education and Economic Education

I. Evaluation Strategies in Career Education

Each of the above topics is supplemented by appropriate study materials and group exercises. The Trainer's Manual was/is intended to be self instructional and is designed in a topic-question-exercise format.

In addition, the Career Education Consultant provided other services:

A. Service as a resource person to 16 meetings to present career education.

B. Speaker to seven public service groups, e.g. Lions, to present the career education concept.

C. Responded to out-of-state requests for career education materials which were not filled because of budget restrictions. Also, received 25 requests from in-state L.E.A.'s for materials which could not be filled due to budget restrictions.

Subobjective 3.4: Demonstrate a dissemination plan for informing

Maine youth of career training opportunities in the State.

Disseminate Career Education materials -- through the career education office located in the State Department of Education the following materials are provided:

a. Career Education and Maine Curriculum Guide by E.G. Johnson and C.W. Ryan.

b. Career Education and Maine: General Information by E.G. Johnson and C.W. Ryan.

c. Maine Trainer's Manual for Career Education by C.W. Ryan, et al. Copy sent to all school superintendents.

d. Comprehensive Career Education Project brochure.

e. Sample curriculum materials are available.

An analysis of our records indicate that the following requests were filled. About 25 L.E.A.'s received career education materials from the consultant. Budget restrictions limited our ability to respond from the state department level.

To provide Maine youth with career information about training opportunities the Bureau of Vocational Education has entered into a formal agreement with the Division of Manpower Research. The major goal is to develop a Career Resource Center that will provide up-to-date career information to youth and adults. A Demonstration Center was established in Portland, Maine and the staff is preparing career materials for distribution. The materials will translate the most recent Manpower data into concise, short reports for use in career planning. It is anticipated that school counselors, teachers

and concerned citizens will be able to use this service. Technical advice was provided to the Career Resource Center staff by Mrs. Bagley and Professor Ryan.

11. Evaluation Plan

A. After meetings with Ohio State consultants and university personnel, the evaluation plans for the Bangor Comprehensive Career Education Project were finalized in October, 1975. Charts 4, 5, 6 describe the design and statistical package to be utilized. The statistical treatments were analysis of covariance, variance, and t-tests to determine if there were significant differences between the control and experimental class (intact classes were the analysis units).

After reviewing the Handbook for the Evaluation of Career Education Programs, (U.S.O.E., 1974) and A Practical Guide to Measuring Project Impact on Student Achievement (U.S.O.E., 1975) the following instruments were selected for use in this program:

NAME	PUBLISHER	GRADE LEVEL
Career Education Knowledge Inventory	Center for Vocational-Technical Education, Ohio State University	Adult
Attitude Inventory	Unknown	Adult
Self-Concept and Achievement Motivation Inventory (SCAMIN)	N.J. Milchus, et al Person-O-Metrics, Inc. 20504 Williamsburg Rd. Dearborn Hts., Michigan 48121	K-3
Survey of School Attitudes	T. Hogan, Harcourt, Brace and Jovanovich, Inc., New York	1-6
Career Knowledge	Barbara Fulton, Evaluative Research Associates, 5431 Trailbend Road St. Louis, Mo. 63033	1-3

NAME	PUBLISHER	GRADE LEVEL
Self Esteem Inventory	S. Coopersmith W.H. Freeman & Co. San Francisco, Ca., 1967	2-12
Career Maturity Inventory, Attitude Scale	J.M. Crites, McGraw-Hill/ California Test Bureau	4-12
Occupational Knowledge Test (Form A)	R.W. Heath Comprehensive Evaluation Project U.S.O.E. Contract No. EC-9-099017-4424 (010)	4-6
Knowledge of Occupational Areas Test (Form B)	Center for Occupational Education, North Carolina State University of Raleigh, 1973	4-6
Career Development Inventory	D. Super, et al Teachers College, Columbia University, New York, N.Y.	7-12
Career Awareness Survey	R. Drummond and C.W. Ryan, College of Education, University of Maine Orono, Maine	4-12

CHART 4

EVALUATION INSTRUMENTS USED IN
GRADES K-3

OBJECTIVES	CAREER EDUCATION ELEMENTS	INSTRUMENT	TIME	DESIGN	STATISTICAL TESTS
Attitude Toward Self	Self Awareness	Self Concept and Motivation Inventory (SCAMIN)	None	Pre-Post-Test Control Group	Analysis of Co-Variance, Analysis of Variance, t-Tests, and Class $\bar{X}$ Scores
		Self-Esteem Inventory (Coopersmith)	20 min.	"	"
Responsibility	Decision Making	I.E. Scale Norwicke-Strickland	5 min.	"	"
Career Knowledge	Career Awareness	Career Knowledge Test	20 min.	"	"
Attitude Toward School	Appreciations & Attitudes Educational Awareness	Survey of School Attitudes (Primary Form)	30 min.	"	"

CHART 5

EVALUATION INSTRUMENTS USED IN
GRADES 4-6

OBJECTIVES	CAREER EDUCATION ELEMENTS	INSTRUMENT	TIME	DESIGN	STATISTICAL TESTS
Attitude Toward Work	Career Awareness	C.M.I, Attitude Scale	20 min.	Pre-Post-Test Control Group	Analysis of Co-Variance, Analysis of Variance, t-Tests, and Class X Scores
Attitude Toward Self	Self Awareness	Self Esteem Inventory (Coopersmith)	20 min.	"	"
Career Knowledge And Attitude and Awareness	Career Awareness	Occupational Knowledge Test (Heath-LaMora) Career Attitudes Inventory Vocational Awareness Survey	25 min.	"	"
Attitude Toward School	Appreciations & Attitudes Educational Awareness	Survey of School Attitudes (Intermediate Form)	40 min.	"	"
Responsibility	Decision Making	I.E. Scale Norwicke-Strickland	15 min.	"	"

CHART 6

EVALUATION INSTRUMENTS USED IN
GRADES 7-12

OBJECTIVES	CAREER EDUCATION ELEMENTS	INSTRUMENT	TIME	DESIGN	STATISTICAL TESTS
Attitude Toward Work and Career Awareness	Career Awareness	Attitude Scale, C.M.I. Vocational Awareness Survey (Drummond & Ryan)	20 min.	Pre-Post-Test Control Group	Analysis of Co-Variance, Analysis of Variance, t-Tests, and Class X Scores.
Knowing Self Knowing Jobs Goal Selection Planning Problem Solving	Self Awareness Career Awareness	Career Development Inventory, Form I	45 min.	"	"
Increased Self-Concept	Self Awareness	Self-Esteem Inventory (Coopersmith)	15 min.	"	"
Responsibility	Decision Making	I.E. Scale Norwicke-Strickland	5 min.		

B. Procedure

By matching each experimental group with a control group, it was expected that measurable attitudinal and knowledge differences would result between the two groups in relation to the Self-Awareness, Career Awareness, and Career Knowledge elements of Career Education. The experimental groups were matched with corresponding grade level control groups by size. No attempt was made to control for I.Q., school achievement or sex composition of the group. Similarity of instructional program for both the experimental and control groups was also used in selection.

Due to time limitations placed upon the testing component by the Bangor School Department, testing could only be conducted within the framework of three two-day sessions and forty-five minute class periods. Prior to test administration, proctors were recruited and trained in testing procedures and standardized response patterns.

Testing teams composed of project staff members, graduate students, and undergraduate career education interns completed the pre-testing in accordance with the following schedule:

TEST SCHEDULE

Grades	Dates	
	Pre-Test	Post-Test
K-6	11/13/75 to 11/14/75	4/9/76 to 4/13/76
7-9	11/20/75 to 11/21/75	4/9/76 to 4/13/76
10-12	12/4/75 to 12/5/75	4/9/76 to 4/13/76

Charts 7 and 8 identify data relevant to the experimental and control teachers. The number of students tested per grade and classes not matched with a control are identified.

C. Results

In addition to gathering evaluative data on the students involved in this project, it was also important to assess teacher and teacher educators' participation. Chart 9 identifies the instruments used for each group. The remaining sections of this report are organized as follows:

1. Teacher Outcomes - Career Knowledge and Career Attitude: The primary objective was to train teachers in the philosophy, concepts and methodology of career education via a series of structured workshops. Pre-training Knowledge and Attitude towards career education was measured for the Bangor teachers. A post-measure was administered to determine if gains in knowledge and changes in attitude did occur. Analysis of pre- and post-test Career Knowledge results indicate that the Bangor teachers improved significantly in career Knowledge (See Table 1).

TABLE 1

COMPARISON BETWEEN CONTROL AND
PROJECT TEACHERS ON THE KNOWLEDGE TEST

GROUP PROJECT	PRE MEAN	PRE SD	POST MEAN	POST SD	PAIRED "t"	UNPAIRED "t"
Project (N=32)	30.33	7.08	41.39	4.60	9.70**	
Control (N=7)			31.00	7.78		4.76**

**p > .01

A post-test only control group design was utilized to compare the two groups on the scores of the Knowledge test. With 38 degrees of freedom a "t" of 4.76 (p > .01) was computed between the means of the project and control teachers. The project teachers had a mean score ten points higher than the control group (41.39 to 31.00). The mean for the control group was similar to the pretest mean of the project group (31.00 to 30.33) prior to the workshops training. There was a significant gain in mean scores from the pretest-post-test comparison for the project teachers on the Knowledge test. A "t" of 9.70 with 31 d.f. was computed and was significant at the .01 level. The results indicate that a planned, sequential training program that reviews the eight elements of career education will raise the knowledge level of teachers. Self report data from the Bangor teachers (See Appendix J) corroborates this finding.

CHART 7

ELEMENTARY SCHOOL TEACHERS

EXPERIMENTAL TEACHERS			MATCHED CONTROL TEACHERS		
GRADE	TEACHER	# OF STUDENTS	GRADE	TEACHER	# OF STUDENTS
K	Rook	22	K	Nadeau	22
1	D'Ericco	52	1	Bebe	25
1	Piper	20	1	Averill	21
2	Lane	20	2	Woodcock	19
3	Mockler	26	3	Smith	26
3-4	Supranovich	19		NO CONTROL GROUP	
4	Parks	29	4	Clisham	27
5	Boynton	18	5	London	18
6	Cary	22	6	Torrey	20
6	Gardiner	22	6	Clancey	25
6	Tingley	25	6	Dunham	24
5	Parsons	23	5	Bryan	22
		SPECIAL EDUCATION TEACHERS			
	Gallant	15		Whitehouse	15
	Roberts	15		Loftus	15
	Weissman	6		NO CONTROL GROUP	

CHART 8

JUNIOR HIGH SCHOOL TEACHERS

EXPERIMENTAL TEACHERS			MATCHED CONTROL TEACHERS		
SUBJECT	TEACHER	# OF STUDENTS	SUBJECT	TEACHER	# OF STUDENTS
French	Sturgeon	30	French	Harvey	27
Social Studies	Lynch	18	Social Studies	Currier	20
English	Willette	16	English	Liscomb	26
Social Studies	Richmond	27	Social Studies	Fortier	30
Math	Winslow	27	Math	Finch	18
Typing	Smith	6	Typing	Soucie	18
English	B. Parker	10	English	V. Parker	20
Social Studies	Salisbury	28	Social Studies	Monk	29
Reading	McMahon	20	Reading	Currier	25
		HIGH SCHOOL TEACHERS			
Math	McAlary	24	Math	Harrison	25
English	Booth	23	English	Campbell	16
Drafting	Krupke	17	Drafting	Evans	17
History	Sirois	31	History	Jones	30
English	Pulley	13	English	Pike	28
Math	Brann	25	Math	Harrison	12

CHART 9

EVALUATION INSTRUMENTS USED
TO ASSESS NON-STUDENT PARTICIPANTS

OBJECTIVES	TEST	TIME	DESIGN	ANALYSIS
Attitude Toward Career Education	Attitude Inventory	15 min.	Pre-Post-Test	Analysis of Co-variance, Analysis of variance, t-Tests.
Knowledge of Career Education	Knowledge Inventory	20 min.	"	"
Survey of Teachers	Questionnaire	15 min.	Pre- For Teacher Educators Only.	Coding, Categorization and Percentage Computation.
Attitude Toward In-Service Training	In-Service Evaluation	10 min.	Continuous	"
Attitude Toward Teacher Education Seminars	Seminar Evaluation	20 min.	Post- Only	"
Career Education Activity	Activity Logs	No Time	Ongoing	Not applicable.

N = 34 Bangor Public School Teachers

N = 38 University-Based Teacher Educators

A Career Education Attitude Inventory was administered on a pre-post test basis to the project teachers. The test consisted of thirty-two items for which the teachers had to respond on a five-point scale from strongly agree to strongly disagree. Chi square was used to compare the pretest and post-test change by item.

Insert Table 2 Here

There were significant shifts in the response patterns on eight of the thirty-two items. Question 4, addressing itself to the incorporation of career education into the regular school curriculum, rather than in separate career programs, was one of the items that teachers had a significant change of attitude ($p > .01$). In their pretest response to this question, the teachers tended to disagree with the incorporation; however, the post-test responses showed a high degree of agreement. There was also a similar shift in attitudes ($p > .01$) on Question 25 which reflected an increased agreement within the teacher population concerning the responsibility of the schools to emphasize the value and appropriateness of technical and community colleges. Teachers also indicated a significant shift toward disagreement with the statements, between the pre and the post-tests on Question 8 and 9 ($p > .01$). On Question 8, project teachers tended to disagree with the statement that the curriculum is too crowded for further programs. On Question 9, they did not feel that training and re-training opportunities should be provided to both children and

adults in the schools.

Both Questions 11 and 17 also reflected post evaluation changes by the project teachers which indicated significant ($p > .05$), positive changes in career attitudes. In the former, the teachers showed a shift towards agreement that most other teachers have positive attitudes concerning non-college requirement occupations, and in Question 17, the teachers tended to agree that the parents of children would be in favor of career development education.

Question 13, concerning the suitability of several field trips per year to satisfy the career education needs of elementary school children, was appraised more positively in terms of the post evaluation ($.02 > p < .01$) than on the pre-program evaluation. Similarly, as a result of the program, there was a significant shift ($.10 > p < .05$) in the teachers' attitudes from the pre to post evaluation of attitudes concerning Question 31. On this question, there is reason to believe that the teachers' attitudes shifted towards a realization that career education has been generally accepted on a K-12 scope in the majority of the nation's schools.

TABLE 2

PRE-POST TEST COMPARISON OF ATTITUDES OF BANGOR TEACHERS ON THE CAREER ATTITUDES SCALE

QUESTION ITEM:	X^2	df	Signif.
1. The school should offer a basic academic program to everyone and specific career concerns should be dealt with after high school.			
2. Modern day advances in technology have led to increased respectability and status being given to persons who work in technical fields.	6.10588	8	0.6354
3. The responsibility of the schools to prepare youngsters to go to college is more critical than is the responsibility to prepare youngsters for the world of work.	8.26446	6	0.2194
4. Career education should be incorporated into the regular curriculum of the schools with no separate programs in careers.	32.6817	16	0.0081**
5. Unless career education is given special emphasis with designated time in the curriculum, it will likely be soon pushed aside and forgotten.	10.4470	12	0.5768
6. Kindergarten and primary level children should begin to consider career choices and the school program should help them to do so.	14.83139	12	0.2508
7. Career education should be planned and taught by special teachers or consultants.	13.04372	9	0.1606
8. The curriculum is too crowded to consider any new programs no matter how valuable or urgent they may be.	36.69049	9	0.0000**
9. Career training and retraining opportunities should be provided to adults as well as children and the school is the logical agency to offer such opportunities.	33.15007	12	0.0009**
10. The majority of all the teachers that I know are adequately informed about career education to do acceptable jobs in this area with very little in-service training.	9.38942	8	0.3105
11. Most of the teachers that I know have positive attitudes toward occupations that require less than a college education.	23.40930	12	0.0244*

QUESTION ITEM:	X^2	df	Signif.
12. Guidance and counseling specialists are logical persons to take responsibility for career education in the schools.	13.06666	12	0.3642
13. Two or three well planned field trips each year could take care of career education needs of elementary children.	15.86790	6	0.0145***
14. People who complete or only attend college for a time usually attain higher social status than people who do not go to college.	14.29797	12	0.2821
15. The development of positive attitudes toward all types of legitimate work is beyond the capability of the school because home and family influences largely control attitudes and values.	9.69106	9	0.3761
16. All subjects of the curriculum should be organized and taught with a focus upon their relationships with career opportunities and the world of work.	10.06642	12	0.6101
17. Most of the parents that you know would, quite likely, be in favor of education that is oriented strongly toward career development.	23.53951	12	0.0235*
18. In your judgment, the schools with which you are acquainted have adequate resources for providing a variety of experiences for career education K-12.	14.70398	12	0.2580
19. The purposes and various approaches to career education are generally well known by teachers whom I know.	4.10757	6	0.6621
20. Unless outside funds continue to be available, it is likely that career education will soon be gone from the scene of educational developments.	21.71617	16	0.1526
21. Career education has received major impetus, to date, by persons from vocational education and guidance.	12.74999	12	0.3875
22. Career education emphasizes career information and awareness rather than the specific choice and preparation for an occupation or profession.	8.05713	9	0.5284

QUESTION ITEM:	X^2	df	Signif.
23. Most of the teachers whom I know devote more attention to guiding pupils toward the professions than in preparing them to make career decisions.	15.10549	12	0.2357
24. Career education should be "field based" from the beginning in order to insure that the child will have contact with the real world of work.	8.91963	9	0.4447
25. The schools have responsibility to emphasize the value and appropriateness of technical college and community college education on equal terms with the four year college and university.	10.17361	2	0.0062**
26. The major portion of career education should be placed in the elementary school with pre-professional and vocational preparation emerging at the high school levels.	13.12179	16	0.6638
27. Career education objectives are not compatible with the major aims of elementary education and, hence, should not be introduced at this level.	9.62719	6	0.1413
28. Career education should develop the multiple career concept rather than single career emphasis for elementary children.	5.35714	6	0.4989
29. The curriculum development aspect of career education has been broadly based and has involved appropriate specialists from the many curriculum areas.	11.83546	12	0.4590
30. Career education in the elementary school should stress pupil familiarity with the 15 U.S. Office of Education job clusters.	5.75892	9	0.7638
31. It is my observation that career education has been generally accepted on a K-12 scope in a majority of the nations' schools.	19.15422	12	0.0849*
32. There is a clear distinction between the career awareness experiences of elementary school and the exploration and orientation experiences of junior and senior high school.	8.61318	9	0.4737

* $p > .05$
** $p > .01$
*** $p > .02$

2. Teacher Educator Outcomes - Training university-based teacher educators involves more complex planning and organization than originally anticipated. University professors reflect an independence in both their work and approach to volunteer activities that made it difficult to present a sequential program. Constant interruptions for phone calls, emergency meetings, and scheduled classes were biasing factors and undoubtedly contaminated the test results. Self report data from the teacher educator group indicated a high degree of satisfaction with the training program (See Appendix F). A post-test was not administered to this group as the differential rate of attendance among the participants meant very low reliability. The scores for post-testing would not reflect an accurate measure of the content presented. It is interesting to note that Bangor Teachers increased their mean score on the Career Education Knowledge Test from 30.33 to 41.39 and that this increase surpasses the pretest mean of 40.62 registered by the university professors. It suggests that intensive training will increase the knowledge level and a planned training program is required to accomplish this. A post-test for the university group would probably have reflected increased scores and further supported this observation.

3. Student Outcomes - Objectives for the expirmental class students were limited to assessing career awareness, attitude toward self-awareness, career knowledge and career maturity. Their scores on selected instruments were compared with those of students in control groups who received no exposure to career education. Previously reported data (See Chart 1) indicates a substantial increase in the number of career education activities across all eight career education elements from October, 1975 to April, 1976. The remainder of this section will report findings from the student outcome data. Tables will be used to illustrate the statistical data.

KINDERGARTEN

A pretest-post-test matched group design was utilized to compare project and non-project kindergarten classes. One instrument was used to assess attitude toward self and school subjects. The Self-Concept and Achievement Inventory was selected because the tests measures two dimensions of self-concept: Role Expectancy and Self-Adequacy and two dimensions of achievement motivation: Achievement Needs and Achievement Investment. Students respond by marking the face that they would wear to situations read to them by the teacher.

Insert Table 3 Here

TABLE 3

ANALYSIS OF COVARIANCE ON THE SCAMIN
FOR BANGOR PROJECT AND NON-PROJECT KINGERGARTEN GROUPS

SCALE	PRE-TEST				POST-TEST				COVARIANCE
	EXPERIMENTAL		CONTROL		EXPERIMENTAL		CONTROL		F
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	
Achievement Needs	15.04	2.97	16.38	1.72	16.30	2.39	16.26	1.66	0.853
Achievement Investment	14.85	2.98	14.05	1.92	16.15	1.34	15.36	1.86	1.064
Total Motivation	29.90	3.52	30.44	2.74	32.46	1.94	31.63	2.92	2.366
Role Expectancy	12.28	3.22	14.44	2.00	14.53	2.40	14.89	1.56	0.353
Self Acceptance	14.38	3.26	15.77	1.62	15.46	3.40	15.10	1.76	0.812
Total Self Concept	26.66	5.77	30.22	3.40	30.00	5.47	30.00	2.70	0.294
N = 44	21		18		13		19		

No significant differences were found between the pretest-post-test patterns of the two groups by covariance analysis. The results are presented in Table 3. Gain score results for both groups are presented in Table 4. No significant positive gains were made by the control class, but two were significant for the project class. There was a significant positive change by the students on the Role Expectancy and Total Self Concept Scales.

Insert Table 4 Here

FIRST GRADE

A pretest-post-test matched group design was selected to compare project and non-project first grade groups. Three instruments were used to measure dimensions of the program. The Career Knowledge Test was chosen to measure career knowledge, working conditions, and training requirements. A pictorial test was chosen because it was non-verbal and had an attractive format. The Self-Concept and Motivation Inventory (Lower Primary Form) was administered to measure self-concept and achievement motivation. The test is read to the students by the examiner. The student reacts to each situation by marking the face they would wear - happy to sad. The test measures two dimensions of achievement motivation: Achievement Needs and Achievement Investment and two dimensions of self-concept: Role Acceptance and Self-Adequacy. The Survey of School Attitudes (Primary Level) was used to measure attitudes toward school activities and objectives in mathematics,

TABLE 4

SCAMIN MEAN SCORES FOR
BANGOR EXPERIMENTAL AND CONTROL KINDERGARTEN CLASSES

SCALE	EXPERIMENTAL (N=13) PRE	POST	GAIN	CONTROL (N=15) PRE	POST	GAIN
Achievement Needs	14.69	16.30	+1.615	16.73	16.53	- .20
Achievement Investment	15.92	16.15	+ .230	14.13	15.40	+1.26
Total Motivation	30.61	32.46	+1.846	30.86	31.93	+1.06
Role Expectancy	11.69	14.53	+2.846*	14.53	15.00	+ .46
Self Acceptance	13.69	15.46	+1.769	16.00	15.20	- .80
Total Self Concept	25.38	30.00	+4.615*	30.53	30.20	- .33

*$p > .05$

reading and language arts, science and social studies. The items are read by the examiner. The response booklet has a picture of the activity and the student marks the face he would wear: happy, neutral, or sad.

The results of the Analysis of Covariance are presented in Table 5. Only one scale yielded a significant F. The project first graders had significantly higher career knowledge scores at the end of the year than did the control group.

Insert Table 5 Here

The pretest-post-test analysis by classroom is presented in Table 6. One experimental classroom had significantly higher scores on the Career Knowledge, Role Expectancy, Self Acceptance, Total Self and Science scales. The other experimental group had no significant differences between pre and post means. One control group also had significant positive gain on the Career Knowledge, Achievement Investment and Total Motivation Scales. The differences are not consistent across groups but are possibly more reflective of teacher influence than the program.

Insert Table 6 Here

GRADES TWO AND THREE

A pretest-post-test matched group design was utilized to compare project and non-project second and third grade classrooms. Analysis were made for each separately.

TABLE 5
ANALYSIS OF COVARIANCE ON THE
CAREER KNOWLEDGE, SCAMIN AND SURVEY OF SCHOOL ATTITUDES
FOR BANGOR PROJECT AND NON-PROJECT FIRST GRADERS

TEST	PRE-TEST EXPERIMENTAL		PRE-TEST CONTROL		POST-TEST EXPERIMENTAL		POST-TEST CONTROL		COVARIANCE F
Career Knowledge	N=64 22.04	3.71*	46 19.11	4.83	64 25.96	3.66*	40 22.21	5.31	4.035*
SCAMIN									
Achievement Needs	26.43	2.58	25.71	4.30	26.39	2.51	26.25	2.41	0.105
Achievement Investment	23.71	3.58*	21.26	4.81	22.47	2.81	23.67	3.54	1.652
Total Motivation	50.15	4.20*	46.97	5.17	48.86	3.77	49.92	3.86	0.958
Role Expectancy	22.23	3.14	22.91	4.17	23.24	2.90	22.50	3.81	1.420
Self Acceptance	22.98	3.86	23.26	4.87	23.36	2.91	23.27	3.14	0.126
Total Self	45.21	5.96	46.17	8.02	46.60	5.14	45.77	6.00	0.772
Survey of School Attitudes									
Mathematics	22.97	5.04	21.63	6.04	24.15	5.31	25.12	5.68	0.113
Reading	21.03	6.24	23.00	5.10	20.32	7.50	21.15	6.90	0.083
Science	21.80	5.71	23.93	4.85*	24.00	5.15	23.25	5.55	2.306
Social Studies	22.78	5.35	22.66	5.21	23.82	5.29	22.47	5.82	2.152
					92 29		91 99		

* $p > .05$

TABLE 6
PAIRED t COMPARISON OF
CAREER KNOWLEDGE, SCAMIN, AND SURVEY OF SCHOOL ATTITUDES
FOR BANGOR PROJECT AND NON-PROJECT FIRST GRADE CLASSROOMS

		PRE-TEST	POST-TEST	GAIN	t
Career Knowledge					
E Piper	(18)	22.55	24.05	+1.50	1.37
C Beebe	(21)	19.04	23.57	+4.52	4.68***
C Averill	(15)	19.53	20.93	+1.40	0.74
E D'Errico	(41)	21.75	26.87	+5.12	8.49***
SCAMIN					
Achievement Needs					
E Piper	(18)	25.27	25.16	-0.11	-0.12
C Beebe	(23)	25.26	25.78	+0.52	0.48
C Averill	(16)	26.00	26.68	+0.68	0.64
E D'Errico	(39)	26.84	26.92	+0.07	0.19
Achievement Investment					
E Piper	(18)	23.72	24.66	0.94	0.68
C Beebe	(23)	20.47	22.21	+1.73	1.19
C Averill	(16)	22.31	25.62	+3.31	3.22**
E D'Errico	(39)	24.10	21.46	-2.64	-4.69***
Total Motivation					
E Piper	(18)	49.00	49.83	0.83	0.47
C Beebe	(23)	45.73	48.00	2.26	1.65
C Averill	(16)	48.31	52.31	4.00	2.95**
E D'Errico	(39)	50.94	48.38	-2.56	3.41**
Role Expectancy					
E Piper	(18)	21.50	22.11	0.61	0.56
C Beebe	(23)	22.91	21.56	-1.34	1.26
C Averill	(16)	22.50	24.00	1.50	1.30
E D'Errico	(39)	22.46	24.05	1.58	2.47*
Self Acceptance					
E Piper	(18)	22.94	21.55	-1.38	-1.66
C Beebe	(23)	22.21	22.82	0.60	0.43
C Averill	(16)	23.93	23.68	-0.25	-0.22
E D'Errico	(39)	22.76	24.38	1.61	2.16*
Total Self					
E Piper	(18)	44.44	43.66	-0.77	-0.46
C Beebe	(23)	45.13	44.39	-0.73	-0.34
C Averill	(16)	46.43	47.68	1.25	0.65
E D'Errico	(39)	45.23	48.43	3.20	2.86**

Survey of School Attitudes		PRE-TEST	POST-TEST	GAIN	t
Mathematics					
E Piper	(19)	22.68	24.31	1.63	1.15
C Beebe	(23)	18.08	23.56	5.47	2.98**
C Averill	(17)	24.68	27.23	2.58	2.05
E D'Errico	(42)	22.92	24.54	1.61	1.54
Reading					
E Piper	(19)	20.94	19.73	-1.21	-0.83
C Beebe	(23)	21.91	19.60	-2.30	-1.30
C Averill	(17)	24.35	23.23	-1.11	-0.65
E D'Errico	(42)	21.74	20.72	-1.02	-0.85
Science					
E Piper	(19)	23.31	24.31	1.00	0.98
C Beebe	(23)	22.39	22.26	-0.13	-0.08
C Averill	(17)	25.29	24.58	0.70	0.66
E D'Errico	(42)	21.00	24.04	3.04	2.54*
Social Studies					
E Piper	(19)	23.78	22.73	-1.05	-0.64
C Beebe	(23)	21.78	20.60	-1.17	-0.72
C Averill	(17)	23.35	25.00	+1.64	+1.95
E D'Errico	(42)	22.37	24.27	1.90	1.95

* $p > .05$
** $p > .01$
*** $p > .001$

Three instruments were given both as pretests and post-tests. The Career Knowledge Scale was given to measure career knowledge, job characteristics and requirements. The Coopersmith Self-Esteem Inventory was selected to measure attitudes toward self. The Survey of School Attitudes (Primary Level) was used to measure attitudes toward school activities and objectives in mathematics, reading, science and social studies. The Career Knowledge Scale was non-verbal and contained pictures of jobs and job activities. The SSA was read by the examiner. The student booklet contained pictures of activities and the student had to check a face - happy, neutral or sad. The CSEI was read to the student by the examiner and the student was asked to check "Like Me" or "Unlike Me."

GRADE TWO

Career Knowledge

Analysis of Covariance was used to compare the pretest-post-test means of the experimental and control group on the Career Knowledge Test. An F of 1.76 (with 1/35 d.f.) was computed and was not significant at the .05 level. The mean of both groups is presented in Table 7. There were significant positive gains in both groups when paired "t" tests were computed between the pretest-post-test scores, but no over-all difference between the adjusted mean scores when the groups were compared against each other.

Insert Table 7 Here

TABLE 7

PRETEST-POSTTEST PAIRED "t" RESULTS ON THE
CAREER KNOWLEDGE TEST, SELF ESTEEM INVENTORY AND SURVEY OF SCHOOL ATTITUDES
FOR BANGOR GRADE TWO EXPERIMENTAL AND CONTROL GROUPS

TEST	GROUP MEANS							
	EXPERIMENTAL				CONTROL			
	PRE	POST	"t"	d.f.	PRE	POST	"t"	d.f.
Career Knowledge	25.80	24.33	-0.86	14	24.25	24.62	0.20	15
Self Esteem								
General Self	17.11	17.05	-0.06	16	18.60	18.13	-0.36	14
Social Self	4.82	5.11	0.54	16	4.71	6.00	3.03**	13
Home/Parents	4.64	5.11	0.94	16	5.40	5.73	0.55	14
Lie	4.43	3.93	-0.79	15	4.33	3.66	-1.50	14
School	4.64	5.05	1.44	16	6.26	5.40	-1.57	14
Total Self	31.23	33.58	1.54	16	34.66	34.40	-0.12	14
Survey of School Attitudes								
Mathematics	24.43	19.56	-2.37*	15	20.37	23.25	1.06	17
Reading	22.80	24.80	0.86	14	18.93	24.68	2.39*	17
Science	22.56	22.68	0.07	15	19.75	22.56	0.94	17
Social Studies	22.86	25.93	2.70*	14	19.55	24.50	2.69*	17
		92.97				94.99		

*p > .05
**p > .01
***p > .001

Self-Esteem

Analysis of Covariance was used to compare the pre and post-test means on all sub scales and total scores on the Self-Esteem Inventory for the experimental and control groups. There were no significant F ratios found on any of the scales. All F values were less than 1.0. The means of both groups are presented in Table 7. There were no significant pre-post mean changes on any of the SEI scales for the experimental group. Only one comparison was significant for the control group. Second grade control group students tended to be more truthful on the post-test than they were on the pretest. There were, however, no significant differences in the pre-post-test pattern between the groups.

Survey of School Attitudes

Analysis of Covariance was used to compare the pre and post-tests means of four scales of the Primary form of the Survey of School Attitudes for the experimental and control groups. There was one significant F ratio found on the Mathematics scale. The means of both groups are presnted in Table 7. An F of 15.07 (1/29 d.f.) was significant at the .01 level. The experimental group showed a negative gain in attitude toward Mathematics while the control group demonstrated a positive gain. Both the experimental and control groups had signficant positive gain in their attitude toward Social Studies. The control group also had a similar positive gain in attitude toward Reading/Language Arts.

GRADE THREE

Career Knowledge

Analysis of Covariance was used to compare the pretest-post-test pattern of means of the experimental and control groups on the Career Knowledge Test. Although both groups, when compared individually show pretest-post-test gains on the Career Knowledge Test, the covariance analysis yielded a non-significant F ratio. See Table 8.

Insert Table 8 Here

Self-Esteem

Analysis of Covariance was used to compare the pre and post-test means on all the sub scales and total scores on the Coopersmith Self-Esteem Inventory. There were no significant differences in the pattern of pretest-post-test means for either group. The means of both groups are presented in Table 8. There were no significant project mean changes on any of the SEI scales for the experimental group. Only one comparison was significant for the control group. Third grade control group students tended to be more truthful on the post-test than they were on the pretest.

School Attitudes

Covariance analysis of the four scales of the Survey of School Attitudes showed significant differences in the adjusted means of the two groups on two of the scales, Mathematics and Science. (Mathematics $F = 15.07$, 1/36 d.f. $p > .01$; Science $F = 7.40$, 1/36 d.f. $p > .01$). The students in the control group had a positive

TABLE 8

PRETEST-POSTTEST PAIRED "t" RESULTS ON THE
CAREER KNOWLEDGE TEST, SELF ESTEEM INVENTORY AND SURVEY OF SCHOOL ATTITUDES
FOR BANGOR GRADE THREE EXPERIMENTAL AND CONTROL GROUPS

TEST	GROUP MEANS							
	EXPERIMENTAL				CONTROL			
	PRE	POST	"t"	d.f.	PRE	POST	"t"	d.f.
Career Knowledge	22.80	25.85	2.14*	19	23.94	26.89	2.30*	18
Self Esteem								
General Self	17.00	17.14	0.20	20	18.54	19.27	1.12	21
Social Self	4.90	5.33	1.48	20	5.22	5.77	1.24	21
Home/Parents	5.33	5.33	0.00	20	6.09	5.77	-1.02	21
Lie	4.90	5.38	1.03	20	4.51	5.23	2.11*	21
School	4.90	4.38	-0.90	20	6.04	6.04	0.00	21
Total Self	32.14	32.38	0.19	20	35.90	36.31	0.34	21
Survey of School Attitudes								
Mathematics	23.19	17.57	-4.26**	20	20.55	24.95	2.56*	19
Reading	16.00	20.27	2.32*	21	18.85	24.35	2.59*	19
Science	20.86	21.68	0.47	21	18.75	25.25	2.92**	19
Social Studies	22.13	27.30	3.62**	22	22.10	26.31	3.58**	18
		86.82			80.25			

*p > .01
**p > .05
***p > .001

gain in their attitude toward Mathematics while the experimental group developed a less favorable attitude. In Science the control group developed a significantly higher positive attitude toward Science than the experimental group. In comparing the changes just within the groups, the control group showed a significant positive change on all four scales while the experimental group did in two, Reading and Social Studies. The experimental group had a more negative attitude toward Mathematics at the end of the year than they did at the beginning.

GRADES FOUR TO SIX

A pretest-post-test matched group design was utilized to compare project and non-project classrooms. Four instruments were used to assess student outcomes. The Survey of School Attitudes was selected to measure attitudes toward school subjects and activities. The Coopersmith Self-Esteem Inventory was used to assess changes in attitudes toward self. The Occupational Knowledge Scale was given to assess students' knowledge of fields of work, working conditions related to jobs, education attributes required as well as duties of various jobs. The Attitude Scale of the Career Maturity Inventory was given to measure students' reactions toward making career choices and entering the world of work. The test measures five attitudinal clusters: 1) involvement in the career choice process, 2) orientation toward work, 3) independence in decision making, 4) preference for career choice factors and 5) conceptualizing of the career choice process.

Analysis of Covariance was computed to compare the pretest-post-test patterns of the experimental and control groups by grade. The results are presented in Table 9. No significant differences were found between the two groups at the fourth grade level. Only one scale yielded significant differences at both the fifth and sixth grade level. Students who were in the experimental groups tended to become more truthful than the control group students.

Insert Table 9 Here

Paired "t" analysis was completed by grade for each classroom. The fourth grade results are presented in Table 10, fifth grade in Table 11, and sixth grade in Table 12. On the fourth grade level both experimental and control classrooms showed significant positive gain on Occupational Knowledge. The control classroom also had a significant gain on the C.M.I. Attitude Scale and the S.S.A. Mathematics scale.

Insert Table 10 Here

On the fifth grade level both the experimental and control classrooms showed significant positive change on the S.E.I. General and Self and Total Self Scales, The Occupational Knowledge Test. The experimental fifth grade group had a significant gain on the C.M.I. Attitude Scale. The control group had more positive attitudes develop in the area of Mathematics while the experimental group had a similar gain in Reading/Language Arts (See Table 11.

Insert Table 11 Here

TABLE 9

ANALYSIS OF COVARIANCE OF POST TEST SCORES
BY GRADE WITH PRETEST AS COVARIATE
FOR BANGOR EXPERIMENTAL AND CONTROL GROUPS

TEST	GRADE 4		GRADE 5		GRADE 6	
	d.f.	F	d.f.	F	d.f.	F
S.S.A.						
Mathematics	1/37	.641	1/24	.278	1/112	1.054
Reading	1/37	1.091	1/24	.182	1/112	0.336
Science	1/37	.881	1/24	.174	1/112	0.869
Social Studies	1/37	.086	1/24	.093	1/112	3.095
S.S.I.						
General Self	1/35	3.067	1/20	.932	1/86	0.456
Social	1/35	.037	1/20	1.617	1/86	1.742
Home/Parents	1/35	.891	1/20	.228	1/86	0.00
Lie	1/35	2.885	1/20	10.319**	1/86	8.866**
School	1/35	.299	1/20	1.965	1/86	0.842
Total Self	1/35	1.071	1/20	.179	1/86	0.471
Occupational Knowledge	1/37	1.715	1/20	.238	1/87	2.020
C.M.I. Attitude	1/37	.189	1/21	.179	1/114	.000

**p > .01

TABLE 10

PRETEST-POSTTEST PAIRED "t" RESULTS ON THE
CAREER KNOWLEDGE TEST, SELF ESTEEM INVENTORY,
SURVEY OF SCHOOL ATTITUDES AND C.M.I. ATTITUDE SCALE
FOR BANGOR GRADE FOUR EXPERIMENTAL AND CONTROL GROUPS

TEST	GROUP MEANS							
	EXPERIMENTAL (Parks)				CONTROL (Clisham)			
	PRE	POST	"t"	d.f.	PRE	POST	"t"	d.f.
C.M.I. Attitude	27.00	27.50	-0.28	21	25.44	27.88	2.24*	17
S.E.I.								
General Self	16.50	17.50	1.18	21	16.00	15.29	-0.58	16
Social Self	5.22	5.59	1.19	21	4.76	5.52	1.40	16
Home/Parents	5.54	6.09	1.27	21	4.94	5.41	0.69	16
Lie	6.13	6.68	1.70	21	5.23	5.52	0.63	16
School	5.54	4.90	-1.48	21	4.62	4.25	-1.07	15
Total Self	34.86	34.09	-0.35	21	30.35	29.70	-0.29	16
Occupational Knowledge	16.81	34.54***	7.97	21	21.55	33.55	5.36***	17
S.A.								
Mathematics	19.00	20.82	1.42	22	17.23	21.41	2.28*	16
Reading	22.91	22.82	-0.08	22	24.35	25.58	0.28	16
Science	22.04	21.65	-0.39	22	22.23	23.23	0.61	16
Social Studies	21.73	21.34	-0.45	22	20.64	23.23	1.62	16

*p > .05
**p > .01
***p > .001

TABLE 11

PRETEST-POSTTEST PAIRED "t" RESULTS ON THE
CAREER KNOWLEDGE TEST, SELF ESTEEM INVENTORY,
SURVEY OF SCHOOL ATTITUDES AND C.M.I. ATTITUDE SCALE
FOR BANGOR GRADE FIVE EXPERIMENTAL AND CONTROL GROUPS

TEST	GROUP MEANS							
	EXPERIMENTAL (Boynton)				CONTROL (London)			
	PRE	POST	"t"	d.f.	PRE	POST	"t"	d.f.
C.M.I. Attitude	22.69	28.61	2.87*	12	27.00	28.35	0.67	13
S.E.I.								
General Self	16.83	25.66	9.69***	11	14.09	22.54	5.20***	10
Social Self	5.08	6.25	2.88*	11	4.81	5.45	1.05	10
Home/Parents	5.16	5.83	1.54	11	5.80	5.80	0.00	9
Lie	6.58	6.50	-0.29	11	6.81	5.00	-4.10**	10
School	4.00	5.00	1.73	11	4.00	6.09	2.53*	10
Total Self	31.08	42.75	8.21***	11	28.18	39.36	3.93**	10
Occupational Knowledge	26.09	49.81	4.68***	10	23.00	45.00	4.97***	12
S.A.								
Mathematics	16.07	19.92	2.07	13	19.76	23.84	2.18*	12
Reading	19.64	23.64	2.39*	13	21.38	23.76	2.07	12
Science	24.00	25.71	1.11	13	23.15	24.84	1.99	12
Social Studies	20.78	22.57	0.92	13	22.23	22.53	0.21	12

*p > .05
**p > .01
***p > .001

On the sixth grade level a similar pattern was found on the scales of the S.E.I. for the three experimental and two control groups. No consistent pattern was evident on the C.M.I. Attitude and Survey of School Attitudes (See Table 12).

Insert Table 12 Here

GRADES SEVEN TO TWELVE

A pretest-post-test matched group design was utilized to compare project and non-project classrooms. Four instruments were used to assess student outcomes. The Coopersmith Self-Esteem Inventory was selected to measure attitudes toward self. The Attitude Scale of Crite's Career Maturity Inventory was given to elicit the changes of students' reactions toward making career choices and entering the world of work. The test measures five attitudinal clusters: 1) involvement in the career choice process, 2) orientation toward work, 3) independence in decision making, 4) preference for career choice factors and 5) conceptions of the career choice process.

Super and Forrest (1972) Career Development Inventory was used to measure the planning orientation of students, their use of available resources, and their knowledge of career information and decision making.

The Nowicke-Strickland Locus of Control Scale was selected to measure the type of orientation, internal or external, of students.

Analysis of Covariance was computed to compare the pretest-post-test patterns by the experimental and control group classes by grade. A summary of the results is presented in Table 13.

TABLE 12

PRETEST-POSTTEST PAIRED "t" RESULTS ON THE CAREER KNOWLEDGE TEST, SELF ESTEEM INVENTORY SURVEY OF SCHOOL ATTITUDES AND C.M.I. ATTITUDE SCALE FOR BANGOR GRADE SIX EXPERIMENTAL AND CONTROL GROUPS

TEST	GROUP MEANS							
	EXPERIMENTAL				CONTROL			
	PRE	POST	"t"	d.f.	PRE	POST	"t"	d.f.
C.M.I. Attitude								
(Tingley)	29.38	30.42	0.79	20	(Dunham) 26.85	30.15	2.77*	19
(Gardiner)	27.23	28.64	1.14	16	(Clancy) 27.10	29.10	1.92	19
(Cary)	32.42	35.80	2.96**	20	(Torrey) 29.38	32.11	2.01	17
		91.86				91.34		
S.E.I.								
General Self	18.26	26.31	7.26***	18	19.15	26.55	8.50***	19
	16.41	25.17	5.58***	16	N.A.			
	18.33	26.33	5.26***	14	18.70	25.17	6.77***	16
Social Self	5.31	5.94	1.41	18	5.55	6.00	1.31	19
	6.11	6.17	0.25	16	N.A.			
	5.80	6.00	0.61	14	5.05	5.29	0.61	16
Home/Parents	5.94	5.94	0.00	17	6.30	5.85	-1.00	19
	5.58	6.23	1.08	16	N.A.			
	6.50	5.78	-1.06	13	5.47	6.23	1.97	16
	7.05	7.15	0.35	18	6.80	5.80	-3.45**	19
	6.76	7.23	1.73	16	N.A.			
	7.28	7.42	0.46	13	6.41	6.94	2.17*	16
School	5.31	6.52	2.69*	18	5.20	5.65	0.83	19
	3.64	6.00	5.10***	16	N.A.			
	5.28	5.78	0.79	13	4.82	6.11	2.81*	16
Total Self	34.52	47.26	4.24***	18	36.20	44.10	5.11***	19
	31.76	43.76	5.41***	16	N.A.			
	35.13	43.31	3.37**	14	34.05	42.82	5.65***	16
Occupational Knowledge	54.85	54.45	-0.16	19	54.88	54.52	0.31	16
	58.22	48.11	-4.06***	17	53.55	50.40	-1.51	19
	57.71	57.52	-0.10	20	54.94	58.94	0.90	16
S.S.A.								
Mathematics	19.90	22.20	1.33	19	18.25	18.20	-0.04	19
	17.26	18.53	0.70	14	19.78	21.47	1.47	22
	14.66	16.00	1.01	20	15.43	14.31	-1.37	15
Reading	20.70	20.90	0.19	19	19.40	18.05	-1.23	19
	18.46	19.86	0.89	14	20.13	22.47	2.77*	22
	17.66	18.71	0.83	20	19.25	17.81	-1.34	15
Science	19.85	20.60	0.42	19	19.85	18.70	-1.33	19
	21.06	20.33	-0.62	14	22.08	23.17	1.19	22
	15.90	17.61	1.67	20	17.11	15.29	-1.98	16
Social Studies	20.80	21.60	0.53	19	20.45	19.50	-0.82	19
	21.66	20.73	-0.65	14	20.17	21.08	0.85	22
	16.85	19.85	2.25*	20	19.43	16.62	-2.04	15

*p > .05
**p > .01
***p > .001

236.92

N.A. - Not Available

226.67

Only one difference was found at the seventh grade level. Project seventh graders had a significantly higher adjusted mean score than control group students on the Attitude Scale on the C.M.I. On the eighth grade level there was a significant difference only on one scale, the Lie scale on the S.E.I. Project students tended to become more honest than non-project students. No significant differences were found at the ninth grade level. On the tenth grade level, two scales on the S.E.I. yielded significant differences, the Lie and School Adjustment scales. Project students tended to have more positive attitudes toward school and be more truthful at the end of the year than non-project students.

Insert Table 13 Here

There were eight scales with significant differences at the twelfth grade level. All the differences were in favor of the control group students. The experimental group (composed of potential dropout students), became more negative about almost everything, themselves, work, and orientation toward life.

Paired "t" analysis was completed for each grade for each type of classroom. The results for Grade Seven are presented in Table 14. The same pattern of changes was true of both the experimental group and control group on the S.E.I. One experimental classroom demonstrated significant positive change on the Attitude Scale of the C.M.I. while the other showed no change. The control group showed a significant negative change.

Insert Table 14 Here

TABLE 13

ANALYSIS OF COVARIANCE OF POST TEST SCORES
BY GRADE WITH PRE-TESTS AS COVARIATES
FOR BANGOR EXPERIMENTAL AND CONTROL GROUPS (GRADES 7-12)

TEST	GRADE 7		8		9		10		11		12	
	d.f.	F	d.f.	F	d.f.	F	d.f.	F	d.f.	F	d.f.	F
C.M.I. Attitude	1/28	4.447*	1/94	.273	1/110	2.438	1/45	.224	1/75	2.663	1/9	5.771*
Locus of Control	1/18	.180	1/82	1.084	1/78	.132	1/24	.259	1/74	.067	1/5	7.68*
S.E.I.												
General Self	1/20	.727	1/91	.386	1/106	.002	1/44	.999	1/73	.008	1/9	26.90***
Social	1/20	.101	1/91	.112	1/106	.009	1/44	.146	1/73	.189	1/9	6.312*
Home/Parents	1/20	.127	1/91	.005	1/106	.329	1/44	.013	1/73	.102	1/9	6.376*
Lie	1/20	.830	1/91	4.344*	1/106	.005	1/44	4.81*	1/73	.209	1/9	6.60*
School	1/20	.512	1/91	1.463	1/106	.093	1/44	7.24**	1/73	1.484	1/9	21.53**
Total	1/20	.268	1/91	.002	1/106	.013	1/44	3.32	1/73	.013	1/9	38.86***
C.D.I.												
Information	1/21	.001	1/93	1.368	1/89	.350	1/46	1.162	1/69	.034	1/8	3.56
Planning	1/21	.083	1/93	.151	1/89	.012	1/46	.029	1/69	3.006	1/8	.140
Resources	1/21	.109	1/93	1.294	1/89	.376	1/46	2.309	1/69	.014	1/8	.639

*p > .05
**p > .01
***p > .001

TABLE 14

PRETEST-POSTTEST PAIRED "t" COMPARISON FOR
BANGOR GRADE SEVEN EXPERIMENTAL AND CONTROL CLASSES ON THE
C.M.I. ATTITUDE SCALE, LOCUS OF CONTROL, SELF-ESTEEM INVENTORY
AND CAREER DEVELOPMENT INVENTORY

TEST	EXPERIMENTAL				CONTROL			
	PRE $\bar{X}$	POST $\bar{X}$	"t"	d.f.	PRE $\bar{X}$	POST $\bar{X}$	"t"	d.f.
C.M.I. Attitude	14.54	28.27	9.18***	10	31.61	29.23	-2.29*	12
	25.71	30.28	1.88	6				
Locus of Control	10.42	9.85	-0.57	6	8.00	7.92	-0.08	13
	N.A.							
S.E.I.								
General Self	14.50	20.84	4.36**	9	16.92	23.92	4.27***	12
	N.A.							
Social	5.70	4.90	-1.71	9	5.38	5.07	-0.46	12
	N.A.							
Home/Parents	5.12	5.12	0.00	9	5.41	5.50	0.10	12
	N.A.							
Lie	5.70	6.30	1.11	9	6.92	6.00	-1.41	12
	N.A.							
School	3.33	6.00	4.13**	9	3.76	5.53	2.71*	12
	N.A.							
Total Self	27.50	35.50	3.88**	9	31.46	29.61	2.95*	12
	N.A.							
C.D.I.								
Information	7.71	6.14	-0.84	10	8.38	7.07	-1.42	13
	4.50	5.50	0.56	3				
Planning	91.18	91.72	0.07	10	86.71	90.28	0.93	13
	79.33	82.33	0.69	5				
Resources	173.90	220.81	1.86	10	219.78	217.28	-0.22	13
	222.33	167.83	-3.26*	5				

*p > .05
**p > .01
***p > .001
N.A. Not Available

The results of the pretest-post-test analysis for Grade Eight are presented in Table 15. One of the two project classrooms showed positive changes on the C.D.I., Information and Resources Scales. None of the non-project classrooms had significant differences. Both the project and non-project classrooms had significant positive changes on the S.E.I. General Self, School and Total Self Scales.

Insert Table 15 Here

The results of the pretest-post-test comparisons for Grade Nine are presented in Table 16. A similar pattern of positive gain in attitudes toward self as represented by S.E.I. scales is true for both project and non-project classes on the General Self and Total Self. There are no consistent trends on the other scales. Several project and non-project classes show positive gains on certain C.D.I. and C.M.I. scales.

Insert Table 16 Here

The results of the pretest-post-test comparisons for Grade Ten are presented in Table 17. There were significant positive gains for two of the project classes on the Coopersmith General Self and Total Self scales as compared to only one of the control classes. The two project classes had a significant positive gain on the School Adjustment scale of the S.E.I. while none of the control classes had a significant change. One control group had a signficant positive gain on the C.D.I. Planning scale, while

TABLE 15

PRETEST-POSTTEST PAIRED "t" COMPARISON FOR
BANGOR GRADE EIGHT EXPERIMENTAL AND CONTROL CLASSES ON THE
C.M.I. ATTITUDE SCALE, LOCUS OF CONTROL, SELF-ESTEEM INVENTORY
AND CAREER DEVELOPMENT INVENTORY

TEST	EXPERIMENTAL				CONTROL			
	PRE $\bar{X}$	POST $\bar{X}$	"t"	d.f.	PRE $\bar{X}$	POST $\bar{X}$	"t"	d.f.
C.M.I. Attitude	32.27	33.11	0.34	17	33.56	36.52	1.64	24
	34.91	35.30	0.64	22	29.36	31.18	1.11	10
		34.33			35.30	34.80	-0.55	19
						34.24		
S.E.I.								
General Self	18.81	26.12	7.94***	15	17.12	25.68	8.50***	24
	18.56	25.04	13.55***	22	17.40	21.80	2.81*	9
					18.85	26.75	9.52***	19
Social	6.06	6.37	0.81	15	5.36	5.76	1.12	24
	5.82	5.86	0.11	22	5.70	5.60	-0.14	9
					5.75	5.75	0.00	19
Home/Parents	5.33	5.86	1.07	15	6.25	6.33	0.36	24
	6.54	6.31	-0.59	22	5.50	4.12	-2.11	9
					6.45	6.85	0.75	19
Lie	6.43	6.56	0.32	15	7.20	7.24	0.20	24
	7.17	6.78	-1.90	22	6.80	6.80	0.00	9
					6.55	7.10	1.99	19
School	4.25	5.81	4.16***	15	4.40	5.36	2.68*	24
	4.65	5.65	2.90**	22	3.80	4.50	1.91	9
					5.10	5.80	1.68	19
Total Self	34.25	43.81	6.16***	15	32.88	43.04	4.22***	24
	35.34	42.60	6.57***	22	31.30	35.90	1.96	9
		43.09			36.15	45.15	5.32***	19
C.D.I.								
Information	9.05	11.05	1.80	14	13.84	15.48	1.77	24
	7.18	17.81	6.37***	15	8.16	11.16	1.84	11
		14.53			14.50	14.41	-0.13	23
Planning	129.93	90.86	-0.80	14	80.62	109.33	1.13	24
	93.00	104.21	3.25**	22	75.42	84.07	0.99	13
		98.94			91.04	87.08	-1.66	23
Resources	214.60	225.06	0.80	14	208.70	216.08	0.85	24
	214.00	236.69	2.50*	22	204.33	225.91	1.25	11
					217.79	228.50	1.54	23
Locus of Control								
	8.33	9.00	0.57	17	6.50	6.79	0.56	23
	5.81	5.63	-0.24	21	N.A.			
					7.25	5.65	-3.05**	19

*p > .05
**p > .01
***p > .001
N.A. - Not Available

TABLE 16

PRETEST-POSTTEST PAIRED "t" COMPARISON FOR
BANGOR GRADE NINE EXPERIMENTAL AND CONTROL CLASSES ON THE
C.M.I. ATTITUDE SCALE, LOCUS OF CONTROL SELF-ESTEEM INVENTORY
AND CAREER DEVELOPMENT INVENTORY

TEST	EXPERIMENTAL				CONTROL			
	PRE $\bar{X}$	POST $\bar{X}$	"t"	d.f.	PRE $\bar{X}$	POST $\bar{X}$	"t"	d.f.
C.M.I. Attitude								
	34.64	34.00	-0.29	16	30.10	33.40	1.25	9
	34.88	34.16	-0.77	17	33.33	36.33	1.51	5
	34.00	36.66	8.00*	2	34.05	34.41	0.27	16
	26.50	26.50	0.00	3	37.17	37.78	0.92	22
	31.55	29.55	-1.33	8	31.14	27.14	-1.87	6
Locus of Control								
	6.06	5.75	-0.34	15	6.12	9.62	2.45	7
	N.A.				6.28	4.85	-1.83	6
	6.66	7.33	0.46	2	5.53	5.06	-0.56	14
	11.00	6.25	-2.79	3	4.00	3.66	-0.55	11
	6.55	8.88	2.65*	8	5.62	7.00	1.06	7
S.E.I.		9.05						
General Self	20.41	26.94	7.93***	16	20.20	25.20	3.17*	9
	18.88	26.44	5.95	17	18.60	27.20	7.12**	4
	N.A.				19.29	27.11	13.57***	16
	15.50	25.00	3.75*	3	19.17	26.60	10.11***	22
	16.77	26.00	7.77***	8	19.83	28.83	5.44**	5
Social	6.94	6.23	-2.22*	16	6.10	5.20	-2.08	9
	5.50	6.05	1.46	17	5.20	5.60	0.78	4
	N.A.				5.64	6.00	0.82	16
	4.75	4.75	0.00	3	6.08	5.86	-0.77	22
	5.55	5.77	0.36	8	6.50	6.83	0.50	5
Home	6.50	5.75	-1.66	16	6.30	5.40	-1.09	9
	6.76	6.47	-0.72	17	6.00	6.20	0.34	4
	N.A.				6.23	6.52	0.81	16
	3.50	3.25	-0.15	3	6.47	6.26	-0.71	22
	4.25	4.00	-0.40	8	6.33	6.00	-0.79	5
Lie	5.58	6.70	3.00**	16	6.40	6.70	0.49	9
	6.33	6.44	0.37	17	6.40	5.40	0.88	4
	N.A.				6.58	6.47	-0.49	16
	6.00	7.00	2.45	3	6.91	7.13	1.10	22
	6.77	6.77	0.00	8	5.50	7.00	1.69	5
School	5.88	6.64	2.89*	16	4.40	5.30	1.41	9
	5.11	5.83	1.83	17	4.00	5.20	2.45	4
	N.A.				4.58	5.58	2.06	16
	3.25	5.00	3.66*	3	5.65	6.82	5.05***	22
	3.55	5.00	4.27**	8	6.00	6.66	1.00	5
Total Self	39.35	45.35	4.65***	16	36.90	41.10	2.31*	9
	35.88	44.44	5.34***	17	33.80	44.80	5.59**	4
	N.A.				35.76	45.23	10.43***	16
	27.00	38.00	2.58	3	37.39	45.47	7.45***	22
	29.88	40.33	6.39***	8	38.66	48.33	3.71*	5

TABLE 16 CONTINUED
GRADE NINE

TEST	EXPERIMENTAL				CONTROL			
	PRE $\bar{X}$	POST $\bar{X}$	"t"	d.f.	PRE $\bar{X}$	POST $\bar{X}$	"t"	d.f.
C.D.I.								
Information	17.75	19.66	2.45*	11	12.28	8.71	-2.63*	6
	12.68	13.93	1.12	15	12.00	13.50	1.57	3
	13.00	13.66	0.28	2	12.13	12.60	0.40	14
	6.66	9.66	1.49	5	15.95	18.95	3.81***	21
	3.00	11.00	3.84	2	10.75	11.75	0.44	3
Planning	97.66	97.66	- .04	11	89.10	90.40	0.18	9
	100.52	99.00	-0.51	16	91.00	84.25	-1.00	3
	102.33	105.00	0.36	2	90.20	105.20	4.82***	14
	87.16	92.83	1.07	5	94.59	93.72	-0.20	21
	82.12	95.50	3.77**	7	90.50	108.25	1.34	3
Resources	237.16	234.58	-0.31	11	226.75	206.50	-1.00	7
	220.11	235.94	1.93	16	220.50	212.25	-0.77	3
	229.00	249.00	2.12	2	228.60	250.80	1.65	14
	240.50	232.50	-0.32	5	236.22	243.50	1.19	21
	195.40	213.00	0.38	4	200.00	198.25	-0.06	3

*p > .05
**p > .01
***p > .001
N.A. - Not Available

one project group had a significant gain on the C.D.I. Resources scale. There were no significant changes on the C.M.I. Attitude or Locus of Control scales for either group.

Insert Table 17 Here

The results of the pretest-post-test comparisons for Grade Eleven are presented in Table 18. There were similar patterns of significant positive gain for both the project and non-project groups on the Coopersmith Self-Esteem Inventory on both the General Self and Total Self scales. Two of the three experimental groups, as compared to none of the control classes, had positive gains on the S.E.I. School Adjustment Scale. Only one group, a control class had a significant positive gain on the C.M.I. Attitude Scale.

Insert Table 18 Here

Two of the three experimental groups had significant positive gain on the C.D.I. Information scale, as compared with none of the control groups.

The results for Grade Twelve are presented in Table 19. Only one class each made up the experimental and control group. The experimental class had a significant decrease in self-esteem on the Social Self and Lie scales as compared with a significant positive gain of the control group on the School Adjustment and Total Self scores. No significant change patterns were found on the C.M.I. Attitude Scale, Locus of Control or C.D.I.

Insert Table 19 Here

TABLE 17

PRETEST-POSTTEST PAIRED "t" COMPARISON FOR
BANGOR GRADE TEN EXPERIMENTAL AND CONTROL CLASSES ON THE
C.M.I. ATTITUDE SCALE, LOCUS OF CONTROL, SELF-ESTEEM INVENTORY
AND CAREER DEVELOPMENT INVENTORY

TEST	EXPERIMENTAL				CONTROL			
	PRE $\bar{X}$	POST $\bar{X}$	"t"	d.f.	PRE $\bar{X}$	POST $\bar{X}$	"t"	d.f.
C.M.I. Attitude								
(Krupke)	35.40	36.80	1.21	9	(Miller) 33.70	33.00	-0.44	9
(Sirois)	33.90	35.00	1.00	19	(Harrison) 33.12	36.12	3.11	7
Locus of Control	5.88	5.00	-1.00	8	7.28	6.57	-0.39	6
	9.33	10.66	1.11	2	8.25	6.12	-2.01	7
S.E.I.								
General Self	18.25	25.50	6.10**	11	20.00	23.44	1.70	8
	15.72	24.33	10.44**	17	21.37	28.25	4.93**	7
Social Self	4.91	5.75	1.20	11	6.88	5.44	-1.80	8
	5.72	5.83	0.30	17	6.62	6.37	-1.00	7
Home/Parents	5.66	6.08	0.70	11	4.87	4.37	-0.94	7
	4.94	5.05	0.25	17	4.50	5.75	1.93	7
[illegible]e	7.00	7.16	0.38	11	5.33	5.88	0.73	8
	6.77	6.88	0.34	17	6.00	6.50	1.08	7
School	3.83	5.50	4.21***	11	3.66	3.55	-0.18	8
	4.27	5.33	3.56**	17	5.14	5.57	1.00	6
Total Self	32.66	42.83	4.84***	11	35.22	36.33	0.36	8
	30.88	40.55	8.37***	17	37.00	45.62	4.95**	7
C.D.I.								
Information	15.25	17.75	1.75	7	12.10	12.30	0.13	9
	14.00	15.04	1.00	20	14.10	15.00	0.77	9
Planning	106.87	111.75	0.94	7	102.18	101.09	-0.31	10
	88.66	94.66	1.91	20	84.50	96.20	2.52*	9
Resources	234.87	252.00	2.92*	7	244.63	227.72	-0.78	10
	238.76	253.80	1.38	20	203.20	222.80	1.47	9

*p > .05
**p > .01
***p > .001

TABLE 18

PRETEST-POSTTEST PAIRED "t" COMPARISON FOR
BANGOR GRADE ELEVEN EXPERIMENTAL AND CONTROL CLASSES ON THE
C.M.I. ATTITUDE SCALE, LOCUS OF CONTROL, SELF-ESTEEM INVENTORY
AND CAREER DEVELOPMENT INVENTORY

TEST	EXPERIMENTAL				CONTROL			
	PRE $\bar{X}$	POST $\bar{X}$	"t"	d.f.	PRE $\bar{X}$	POST $\bar{X}$	"t"	d.f.
C.M.I. Attitude	(McAlary)				(Pike)			
	35.35	36.88	1.87	16	36.22	38.22	2.64*	17
	(Booth)				(Jones)			
	31.30	28.00	-1.22	9	38.88	35.66	-2.25	8
	(Brann)				(Campbell)			
	33.11	34.35	1.18	13	29.71	34.36	1.36	9
Locus of Control								
	8.00	8.30	0.35	19	6.35	6.35	0.36	16
	8.00	7.11	-0.74	10	7.20	6.20	-0.66	4
	6.81	7.23	0.36	16	8.76	7.88	0.21	8
S.E.I.								
General Self	18.38	25.72	6.37***	17	19.05	25.72	6.80***	17
	19.16	25.92	7.70***	13	17.64	24.00	6.54***	8
	18.09	23.09	2.73*	10	19.50	25.66	10.26***	5
Social Self	6.27	5.77	-1.07	17	6.44	6.05	-1.51	17
	5.45	5.18	-0.67	10	5.16	6.33	1.94	5
	5.44	5.85	0.90	13	5.69	5.69	0.00	8
Home/Parents	6.00	6.56	1.45	15	4.47	5.05	1.18	16
	5.11	5.38	1.76	13	3.07	3.66	1.08	8
	4.45	4.09	-0.42	10	5.66	5.33	-0.67	5
Lie	6.50	6.77	0.92	17	6.61	7.11	1.93	17
	6.22	6.50	0.67	13	6.00	6.11	0.53	8
	5.00	5.63	1.14	10	6.00	6.50	1.17	5
School	4.41	5.35	2.37*	16	4.88	4.82	-0.14	16
	3.81	4.00	0.32	10	5.16	5.33	0.28	5
	4.09	4.92	3.00*	13	3.70	3.88	0.94	8
Total Self	34.61	42.55	5.40***	17	34.44	41.33	4.52***	7
	31.81	36.36	1.71	10	35.00	42.66	6.53***	5
	32.94	41.28	6.69***	13	29.07	37.11	4.30**	8
C.D.I.		40.55						
Information	15.00	17.05	2.06*	19	17.00	18.12	1.22	15
	12.00	11.90	-0.08	9	18.12	17.87	-0.14	7
	13.30	16.00	6.00***	10	10.70	14.42	1.29	6
Planning	86.76	91.52	1.39	20	105.75	110.06	1.00	15
	96.66	94.66	-0.35	11	108.62	111.37	0.42	7
	105.40	105.91	0.60	10	86.75	100.25	1.79	6
Resources	221.19	235.28	1.75	20	248.12	258.12	0.95	15
	223.41	236.91	1.70	11	247.30	233.00	-1.69	7
	249.60	253.72	0.37	10	162.14	214.85	+1.49	6
		240.33						

*p > .05
**p > .01
***p > .001

TABLE 19

PRETEST-POSTTEST PAIRED "t" COMPARISON FOR
BANGOR GRADE TWELVE EXPERIMENTAL AND CONTROL CLASSES ON THE
C.M.I. ATTITUDE SCALE, LOCUS OF CONTROL, SELF-ESTEEM INVENTORY
AND CAREER DEVELOPMENT INVENTORY

TEST	EXPERIMENTAL				CONTROL			
	PRE $\bar{X}$	POST $\bar{X}$	"t"	d.f.	PRE $\bar{X}$	POST $\bar{X}$	"t"	d.f.
C.M.I. Attitude	(Pulley)				(Evans)			
	33.66	31.33	-1.51	5	36.83	37.66	0.35	5
Locus of Control								
	9.66	8.00	-1.21	5	4.00	2.00	0.00	1
S.E.I.								
General Self	17.66	16.33	-0.56	5	19.66	27.50	7.73	5
Social Self	5.83	2.53	-3.63*	5	7.00	5.66	-6.32***	5
Home/Parents	5.16	4.16	-1.58	5	4.83	6.33	1.42	5
Lie	6.66	3.66	-4.74**	5	6.50	5.50	-1.94	5
School	5.00	2.33	-2.46	5	4.83	6.33	3.00	5
Total Self	33.66	25.33	-2.45	5	36.66	45.83	5.16**	5
C.D.I.								
Information	15.28	17.00	1.69	6	12.25	12.00	-0.08	3
Planning	102.85	107.28	0.58	6	77.00	112.60	1.94	4
Resources	234.14	249.14	0.66	6	266.75	237.50	-0.86	3

*p > .05
**p > .01
***p > .001

OVERALL COMPARISON

Since randomization was impossible and groups were matched on the basis of subject area, socioeconomic composition, sex, class size, and achievement level analysis of covariance was computed between the pretest and post-test using the class means as the statistical base. The results of the analysis are presented in Table 20. No significant differences in the adjusted mean scores were found in favor of either group when the pretest scores were used as the covariate.

Insert Table 20 Here

DISCUSSION

In part, the lack of differences can be attributed to the training program. The teachers were receiving information on how to initiate the career education elements over a seven month span of time and had limited time to implement career education objectives.

Secondly, the implementation level varied among the teachers. Some spent more time and effort with their classes, and some were more enthusiastic and energetic than others. In addition, junior and senior high school teachers had rather limited contact with their students, more or less one period per day of about forty-five minutes.

Many of the control groups of students may have received elements of the career education program from other personnel such as other non-project teachers and guidance personnel, as well as T.V. and other out-of-school services. Changes in school program, personnel, and class size may also have affected student

TABLE 20

ANALYSIS OF COVARIANCE OF THE
PROJECT AND NON PROJECT CLASSROOMS ON THE
C.M.I. ATTITUDE SCALE, LOCUS OF CONTROL SCALE
COOPERSMITH SELF-ESTEEM SCALE AND THE CAREER DEVELOPMENT INVENTORY
UTILIZING CLASSROOM MEAN SCORES

SCALE	d.f.	F	
Locus of Control	1/41	.001	N.S.
C.M.I. Attitude	1/41	.000	N.S.
S.E.I.			
General Self	1/41	.025	N.S.
Social	1/41	.169	N.S.
Home/Parents	1/41	.191	N.S.
Lie	1/41	.002	N.S.
School	1/41	.013	N.S.
Total Self	1/41	.003	N.S.
C.D.I.			
Information	1/41	3.298	N.S.
Resources	1/41	.780	N.S.
Planning	1/41	.000	N.S.

performance.

Secondly, the instruments although having acceptable validity and reliability may not have measured accurately the instructional objectives attempted by the teachers. More specific and individual types of evaluation procedures might have given a more accurate measure of student outcomes. For example, measuring individual student gain in self-awareness or career awareness in relation to a specific number of career education lessons.

Thirdly, the design did not fit the realities of the program. The teachers because of the size of the district and the willingness to participate were scattered over too many grades and schools. It was hard to make comparisons across grades and schools and groups.

Fourthly, the concurrent measurement might not truly represent the intermediate and long-range gain of the project. Once the pupils and teachers assimilate the career education elements, more change might take place.

PROBLEM AREAS

In organizing a testing program that attempted to assess student change over a short period of time we encountered a variety of problems.

1. The reading level of the students created problems in certain classrooms and deterred from getting accurate results.

2. Some of the tests, such as the Career Knowledge Test, (Pictorial Inventory) were too easy for the groups tested and no gain could be shown because the ceiling was too low.

3. The limitations set by the school district as to the amount of testing time alotted created problems not only in the selection of tests but in administration also.

4. The variation in class scheduling from school to school prevented, in some cases, standardization of testing conditions, test sampling, etc.

5. The directions for the Career Development Inventory were difficult to follow and caused some confusion in the pre-test session. Quite frankly, they needed considerable revising for clarity and this was done for the post-test. The item integrity and content was not revised.

RECOMMENDATIONS

Projects that envision the testing of large numbers should consider the following:

1. More criterion type of reference testing needs to be done to assess the success of career education objectives rather than the global measures commonly utilized or recommended.

2. The reviewers selecting and designating tests for the Office of Career Education consider the reading level and readability of the test as well as reported reliability and validity of the instrument.

3. More administrative support needs to be given to evaluation of the project. Sufficient time needs to be allotted so testing can be uniform and conditions standardized.

4. Other unobtrusive and non-cognitive methods ought to be explored to measure teacher and student changes.

5. A test to measure career education growth in relation to the eight basic elements of career education must be developed. Space for local option questions could be provided. Many of the available standardized Tests do not measure the career education elements, e.g. Appreciations and Attitudes.

SOUTH PORTLAND COMMENTS

The staff of Project REVAMP prepared a report detailing their contribution to the Bangor Career Education Project

(See Appendix L). The data reported here is highly consistent with the perceptions and comments offered by the Bangor teachers on the in-service training (See Appendix M). In addition to the above, a final report from the second evaluation visit of C.V.T.E., Ohio State University staff is attached (See Appendix A).

12. Anticipated Changes and/or Special Problems

Originally, special education classes were not a part of the pre-post-test design. This was due to the lack of test instrumentation specifically developed for special education students. In our discussions with the special education teachers, it was concluded that their classes should be tested to determine if differences did occur as a result of their career education efforts. Therefore, special answer sheets and overhead transparencies for selected tests were developed in order to facilitate the testing procedure. Each special education teacher tested their own classes. The following instruments were selected by the Bangor Special Education teachers:

1. Knowledge of Occupations Test.
2. Self-Esteem Inventory

In 1976-77 a variety of changes will be infused into project goals and activities. For example, we will include testing for basic achievement in Reading, Mathematics, and Social Studies as related to career education. In particular, a comparison between infused career education classes and traditional will be conducted.

The teachers to be trained will total 308 in 1976-77 in contrast to the 35 trained in 1975-76. Training will be conducted by both experienced UMO staff and teachers who recieved training in the first year of the project. Also, a Career Education Activity Guide will be prepared for grades K-12 by Bangor teachers and will include activities developed this year. We will continue to expand the career education resource center and utilize the demonstration team for presenting career education materials.

13. Dissemination Activities

A concerted effort to publicize the career education project at both local and national levels has resulted in public awareness. The following outline documents specific activities.

A. Bangor Dissemination Activities

1. National Activities
   a. Reports
      1. 6 month report
      2. Final report
   b. Requests for Materials
      1. 23 from across the country
      2. 2 from Canada
   c. Visitors
      1. U.S. Office of Education
      2. Ohio State University
      3. Cambridge, Mass.
      4. Moncton, Province of New Brunswick, Canada
   d. Conferences--presentation at Northeast Regional Conference for Social Studies Teachers, Boston, Mass.
   e. Visitations--Cobb County Career Education Program, Marietta, Ga.

2. State Activities
   a. Requests for materials--8 school systems
   b. Workshops
      1. Brewer Public Schools Inservice Day (free of charge)--1 workshop
      2. Limestone Public Schools, Project C.R.E.D.I.T.--2 workshops (free of charge)

c. Conferences--Maine Association of Supervision and Curriculum Development, South Portland, Maine
d. Visitors
   (1). South Portland Project REVAMP staff--42 members
   (2). State Career Education Coordinator
   (3). S.A.D. #5, Cumberland Career Education Project Coordinator
   (4). Junior High Career Education Coordinator, Dexter, Maine
   (5). Remedial Reading Specialist, Waterville High School, Waterville, Maine
   (6). Executive Director and Field Agent, Maine Association of Vocational Education
e. Support Services--sent materials developed through workshops to state coordinator

3. Local Activities
   a. Parent orientation--letter explaining project sent home with experimental students
   b. Community Orientation--4 local advisory committee meetings held
   c. Media Coverage--15 news broadcasts
   d. Local Newspaper
      1. 2 articles
      2. 1 picture
   e. Four requests from local schools
   f. 38 speakers involved in teacher workshop program
   g. 54 student field trips made by experimental classes
   h. 13 teacher field trips made
   i. 125 students job shadowed in local places of employment
   j. 34 teachers job shadowed in local places of employment
   k. 13 University career education interns worked in schools

B. UMO Dissemination Activities:

1. National Activities
   a. Technical reports to Office of Career Education
      (1). Mid-Year report
      2. Final report
   b. Requests for Materials
      1. Three from the Virgin Islands, Australia, Canada
      2. Forty-six from across the United States.
   c. Visitors
      1. Three consultants, 2 Michigan and 1 Missouri
      2. Harry Drier; Consultant from C.V.T.E.; The Ohio State University
      3. Edward Brady; Social Studies Curriculum Coordinator; Cambridge, Massachusetts; May 20, 1976
   d. Conference Presentations:
      1. Canadian Guidance and Counseling Association;

Atlantic Regional Conference; May 12-14, 1976; Halifax, Nova Scotia

2. 7th Northeast Regional Conference on the Social Studies; March 31-April 3, 1976; Boston, Massachusetts
3. Maine College Personnel Association; March 11, 1976; Portland, Maine
4. National Elementary Guidance Conference; University of Maine, Orono; June 27-30, 1976
   a. "Career Education in the Elementary School"
   b. "Evaluating Career Education in The Elementary School"

e. Workshops:
1. Career Education Workshop For Maine Indian Education Staff; April 30, 1976; Orono, Maine
2. Career Education Workshop for Department of Education staff; May 7, 1976; Fredericton, New Brunswick
* 3. Career Education Workshop for Bedford County Public School staff; April 22-23, 1976; Bedford, Virginia
4. Career Education Workshop for Teachers; February 26, 1976; Woburn, Massachusetts
* 5. Career Education Workshop for Merrimack Valley High School Teachers; April 9, 1976; Concord, New Hampshire
6. Career Education Workshop for Howland School District; December 23, 1975; Howland, Maine
7. Career Programs vs. The Liberal Arts Workshop for New England Association of Schools and Colleges; October 10, 1976; Augusta, Maine
8. Career Education and Cooperative Education Workshop for State Department of Education; August 7-8, 1975; Greenville, Maine

f. Conferences attended:
1. New Dimensions in Placement Services; Virginia Polytechnic Institute and State University; February 6-7, 1976; Blacksburg, Virginia
2. American Personnel and Guidance Association (Career Education sessions); April 11-14, 1976; Chicago, Illinois
3. National Conference on Planning For New and Emerging Occupations; March 28-30, 1976; Washington, D.C.
4. Experience Based Career Education Conference; July 29-30, 1975; Philadelphia, Pennsylvania

g. Professional Publications:
1. Career Education; English Notes; University of Maine, Orono; College of Arts and Sciences; Vol. 8, No. 1, Nov., 1975.

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* U.S.O.E. Career Education Projects.

2. Teacher/Counselor Teaming For Economic Awareness submitted to Elementary School Guidance and Counseling Journal (March 17, 1976).

A packet of representative materials is attached as Appendix N.

In summary, most of our dissemination efforts are consistent with the activities specified in the original grant application. A major exception was the development of video cassettes that describe career education and curriculum infusion strategies. Technical costs and lack of staff expertise hindered the effort to produce video tapes. A slide-tape cassette will be developed by October, 1976 to replace the video tapes.

APPENDICES

APPENDIX A

THIRD AND FINAL SITE VISIT REPORT

Prepared by

Jerry Walker
Associate Director for Evaluation

and

Harry Drier
Research Specialist

The Center for Vocational Education
The Ohio State University
Columbus, Ohio

for

The Comprehensive Career Education Project
University of Maine
Orono, Maine 04473

Attention: Dr. Charles Ryan

June 1976

Introduction

On June 3 and 4, 1976, Jerry Walker and Harry Drier of The Center for Vocational Education, visited the Comprehensive Career Education Project at the University of Maine at Orono. (Dr. Walker visited the project on June 3 and 4 with Mr. Drier joining him on June 4.) This visit constituted the last of three on-site visits to the project per provisions of a contract between the University of Maine and The Ohio State University, The Center for Vocational Education. The guidelines for the contracted third party evaluation of the project were as follows:

The independent evaluation team will provide advice and direction in the following areas:

a. appropriateness of the research design

b. instrument selection

c. design of data gathering procedures

d. review of project activities

e. revision advice

f. technical advice on report preparation

g. suggestions for dissemination of project findings

All of the above items were covered during each of the three site visits and verbal and written feedback were provided to the project staff. The purpose of this report is to briefly document the third visit and formally submit this report in fulfillment of the contract.

The report is organized according to highlights of the project's overall strategy and its activities by each of the three levels into which the project was organized: Level I--University based activities, Level II--Local education activities, and Level III--State department based activities. All of the comments here are intended to offer the reviewer's judgments about the major purposes, accomplishments, and problems of the project. The full report to USOE prepared by the project staff will present the detailed, specific accomplishments at all levels throughout the project.

Overall Project Strategy

It appears that the basic strategy used by the Maine Career Education Project was one of indirect leverage on key audiences through which a (hopefully) catalystic effect would emerge. It is important to note that this seemed to be the strategy because in pursuing this approach in contrast to, for example, a low leverage strategy such as curriculum development, the project could not be overly concerned with the specifics of learner objectives and curricular "treatment." The so called "leverage" strategy is one in which intermediate groups such as state department personnel, teacher educators, counselors, classroom teachers, and university students become enabled to work with and through other groups in order to bring about change to impact upon the eventual ultimate target audience of classroom learners.

Much can be said about a leverage strategy toward the initial implementation of a comprehensive career education project and it can be well argued that this is a necessary first step toward creating awareness, enthusiasm and key support. However, the dilemma for evaluation is one of non-specificity of learner objectives and therefore, unclarity about the instrumentation for assessing the extent to which those objectives might have been achieved. It appears, in fact, that an inverse relationship exists between, on the one hand, the extent to which a project pursues a high leverage strategy and, on the other hand, the ability to measure its outcomes in terms of the classroom learner achievements.

This prefatory remark about this project strategy is simply a perception and description of the strategy used and is intended to provide a backdrop for a clearer interpretation of the accomplishments, results, and problems experienced at each of the three levels of the project. Level I highlights follow.

Level I--University-based Activities

The principal objective at this level was to train 100 teacher educators from universities and colleges throughout Maine and the principals operations and concepts of career education. In addition, undergraduate teacher education students (teacher trainees) were to be trained in career education and to assist with the project as were for the graduate level counselor trainees from the University of Maine at Orono.

For many reasons, which are well documented in the formal project report to USOE, the teacher educators were not trained in nearly the quantity hoped for nor was their enthusiasm for being trained as high as had been hoped. Approximately 38 of a target 100 teacher educators actually attended three different workshops and even here attendance was sporadic and

often interrupted. It is the external evaluators opinion that careful consideration needs to be given to "what went wrong" not so much for purposes of making judgments about this project's success but rather to learn from this project how to best involve university-based educators in the future and identify new types of incentives necessary for their enthusiastic participation in career education. It seemed evident that every reasonable effort was made to recruit and involve the teacher educators but as the numbers indicate to little avail. Although pretest on career education knowledge and attitudes were given to some of the teacher educators, difficulties with continuity with attendance and incentives to cooperate precluded the possibility of post-test. Thus, no pre-post test "gains" were available to document the degree of actual success of this objective.

As for training the 15 undergraduate teacher trainees, 13 individuals were recruited and worked with the project throughout the academic year. They worked apparently in all aspects of the project including workshops, evaluation, etc. As of the date of June 3-4 visit, no actual data were available from tests given to these trainees concerning increases in career education knowledge or attitude. As a side light, it was interesting to note that although the trainees were recruited under a priori criteria of grade point average of 2.0, and only eight met that criteria, there seemed to be no qualitative or quantitative difference between the contributions made of the 13 undergraduate students.

Some problems were experienced in retaining the four graduate level counselor trainees throughout the project. The project ends with only two of the original four remaining. Apparently, this was a matter of specific personalities and matches between assignments and their interests and competencies. It was interesting to note however that some project staff felt that the "advanced knowledge" of the graduate level counselor trainees in the notions of career education made it difficult for these individuals to work effectively with classroom teachers who have not been as exposed to the concepts, principals, and jargon of career education.

By and large, the Level I activities were reasonably successful (with the exception of the problem of recruiting and retaining teacher educators). The attempt to involve university-based individuals appeared to be quite reasonable approach toward making differences at the levels that those differences would remain and ripple throughout the state toward the ends of career education. Again, these Level I activities are good examples of the basic "leverage" approach taken by the project with the corresponding dilemmas of specificity and measureability of the objectives.

Level II--Local Education Agency Activities

The major purposes here were to provide intensive orientation and training for 35 classroom teachers in the Bangor Public Schools, to use 30 retired persons as volunteers to assist with the project, and to provide orientation to some 380 K-12 Bangor teachers.

The training for the 35 teachers appeared to be achieved reasonably well. Initial pre-post tests results on career education knowledge surveys (unfortunately in the absence of a control group) indicated what appeared to be substantial gains. It does appear that in fact these 35 teachers were "turned on" to career education principals, concepts, and activities through a variety of seminars and workshops. The use of the South Portland teachers in helping to orient and provide specific activities for the Bangor teachers was a clever tactic that seems to be successful.

Unfortunately, the attempt to recruit and use 30 retired persons did not materialize at all. The reasons hypothesized by the project staff are probably accurate. It would appear that more personal recruitment and contact with individual retirees would be more effective to the extent that project time and resources would allow such contact.

Only indirectly had the 380 K-12 Bangor teachers been oriented to career education as of the June 3-4, 1976 visit by the Ohio State evaluators. A June 14, 1976 workshop was planned in which virtually all of the teachers would receive a full day orientation to career education.

There appeared to be a reasonable structure using key career education elements for organizing the various workshops for the Bangor teachers. However, as mentioned earlier, the specificity of and prescriptiveness of the workshops was quite general in that no actual learner objectives emerged nor did specific and uniformally accepted and/or applied curriculum materials emerge. This again is important to note in interpreting or anticipating the testing results from the K-12 classroom learner.

All of the tests used to measure different career education themes and goals across K-12 were well documented in the evaluation section of the draft of the final report. It did appear that somewhat of a smorgasbord approach was used in selecting tests for administration. By inference, it seemed that a criterion of "when in doubt, use it" prevailed in selecting tests to be administered. In other words, there were a lot of tests, some of which could be argued not to relate to even the diffusely defined learner objectives. As of the date of the final third party evaluation visit, test data were not tabulated for the

K-12 sample of students tested. In the absence of these data, it would be the initial guess of these reviewers that any differences between the control and experimental groups on pre-post gains across the variety of tests would be for the most part insignificant and where significant they would be difficult to interpret as attributable to project treatment or traceable directly to learner objectives. This again reflects the catalystic or leverage strategy used by the project.

Level III--State Department Related Activities

The main purposes here were to prepare a comprehensive and accepted career education plan for the state of Maine and to disseminate widely throughout Maine career education materials. It seemed that several attempts were made through an advisory committee to prepare a career education plan. To date, the fifth revision of the plan has not been formally accepted by the state board of education. Current plans are still under way to have this plan accepted and endorsed by that board. Apparently, a good deal of career education dissemination did occur formally and informally throughout the project and is continuing. This area is but one of several where the third party evaluators felt the project was modest and perhaps too low keyed in "tooting its own horn" about its actual achievements. Much more could be documented and listed about the numbers of workshops, extent of materials produced, number of teachers oriented directly or indirectly, etc.

Summary

Obviously, this is but a quick glance at an extensive project involving the energies of many dedicated and talented people throughout a full academic year. It should not at all be construed as representative of the full range of accomplishments of that project nor should it be seen as a negative commentary on that project's accomplishments. Rather, it is an attempt to provide an independent perspective on that project to offer advice to project staff and to federal funding sources concerning career education as being implemented broadly throughout the country. It was certainly the opinion of the reviewers that the project staff had excellent leadership and full commitment to the purpose of career education.

The project is at least on a par with the state of the art and practice in career education, and the comments here about the leverage approach are not at all intended to be seen as delimitations of the project. The comments herein are intended to place in perspective the inherent difficulties and dilemmas in obtaining evaluation data against specific learner outcomes which could be attributed to definable teacher and curricular interventions.

UNIVERSITY OF MAINE *at Orono*

College of Education

Shibles Hall
Orono, Maine 04473
207/581-7020

The College of Education, University of Maine at Orono, has been awarded a grant from the U.S. Office of Education for $140,000. The purpose of this grant is to institute a Comprehensive Career Education Program in the State of Maine. This is an indication of increasing U.S.O.E. interest in pre-service career education training in institutions of higher education. Part of the U.M.O. program involves the training of teacher-educators, through a series of workshops, to understand career education philosophy, methods and techniques for implementation. The project staff feels that your institution can benefit from participation in these workshops in two ways: first, by enhancing the training of members of your staff in career education philosophy, methods, and techniques; and second, provide your institution with insight into future federal funding priorities (e.g., for fiscal year 1976, the anticipated funding for career education from the U.S.O.E. is $10 million).

We are encouraging you to take part in three six-hour workshops because of your involvement in the training of future teachers. The project staff would appreciate your nomination of a representative team of six or more faculty members to attend these training seminars. If possible, this team should represent a variety of disciplines involved in teacher education; for example, art education, business education, elementary or secondary education. I am enclosing an outline of the training seminars, the schedule of these seminars and additional information concerning the Comprehensive Career Education Project. Each participant will be reimbursed for travel. Lunch will be provided.

If members of your staff are interested in attending, please send me their names by October 10, 1975 so that final arrangements can be made. Other registration materials will be sent at a later date.

Cordially,

Charles W. Ryan
Professor of Education

CWR/pjp

Enclosure

APPENDIX C

COMPREHENSIVE CAREER EDUCATION TRAINING SEMINARS

The following topics will be covered in each session - in addition, time will be allocated for establishing institutional action plans.

Session I. CAREER EDUCATION: WHAT IT IS AND WHAT IT CAN BE

Sub-Topics:

A. Historical Antecedents of Career Education
B. A Rationale for Career Education
C. A Contemporary Definition of Career Education
D. Legislative Influences on Career Education
E. Team Planning by Discipline
(Strategies for Integrating Career Education Concepts and Techniques Into the College Curriculum)

TIME: 9:00 A.M. to 3:30 P.M.

Session II. CAREER EDUCATION: HOW TO IMPLEMENT CAREER EDUCATION

Sub-Topics:

A. Career Education in the Elementary School
B. Career Education: The Secondary School
C. Career Education: The University
D. Infusion Within the Curriculum
E. Team Planning by Institution:
Developing an Action Plan for Career Education

TIME: 9:00 A.M. to 3:30 P.M.

Session III. CAREER EDUCATION: FUTURE TRENDS AND DIRECTIONS

Sub-Topics:

A. U.S.O.E. Commitment to Career Education
B. Expanding Alternatives for Teacher Education Students via Career Education
C. Strategies for Implementing Career Education
D. Team Planning by Institution
E. Seminar Evaluation by Participants

TIME: 9:00 A.M. to 3:30 P.M.

Prepared by
Charles W. Ryan, Ph.D.
Professor of Education and
Director, Comprehensive Career Education Project

APPENDIX D

COMPREHENSIVE CAREER EDUCATION PROJECT

TEACHER EDUCATION SEMINAR EVALUATION

The following questions have been prepared in order that you might provide us with an evaluation of each of the three Career Education Training Seminars. Your assistance with this will be of considerable value, both in this evaluation and in planning future seminars.

* * * * * * * *

Please provide answers to the following:

Have you previously received formal training in Career Education?

Yes_____ No_____ If Yes, what type?_____
(Courses, Seminars, etc.)

Are you presently involved in Career Education on a regular basis?

Yes_____ No_____ If Yes, in what capacity?_____

At which of the following locations did you attend the Comprehensive Career Education Training Seminars?

_____University of Maine - Portland-Gorham

_____University of Maine - Presque Isle

_____University of Maine - Orono

INSTRUCTIONS: Please evaluate each of the items by assigning one of the following rankings to it:

1 = POOR 2 = AVERAGE 3 = GOOD 4 = EXCELLENT

FIRST SESSION:

1. Did this session provide sufficient information concerning Career Education? _____

2. Was the content sufficient in order to provide you with a definition of Career Education? _____

3. Did this session present an adequate rationale for Career Education? _____

4. Kenneth B. Hoyt's paper, "An Introduction to Career Education," provided additional material for the development of:

   a philosophic basis for Career Education _____

   a definition of Career Education _____

   a rationale for Career Education _____

5. Did this session allow sufficient time for discussion and questions? _____

6. Were the methods of presentation appropriate for the topics involved? _____

7. Was the first session long enough to cover the various topics? _____

8. Please evaluate the depth of the content of this session (in terms of your previous knowledge of Career Education.) _____

9. Generally, were the printed handouts of value to you? _____

10. Please list any topics which you feel should have been considered in this first session which were not covered.

_____

_____

_____

11. Have you any suggestions concerning format or methods of presentation which might be incorporated into future sessions concerning topics contained in this first session?

_____

_____

_____

SECOND SESSION:

1. Please evaluate the presentations which were given in each of the following areas, in terms of CONTENT and PRESENTATION:

	CONTENT	PRESENTATIO.
Career Education in the Elementary School	_____	_____
Career Education: The Secondary School	_____	_____
Career Education: The University	_____	_____

2. How would you evaluate this session vis-a-vis your previous knowledge concerning Career Education? _____

3. Did the structure of this session allow sufficient time for questions and discussions? _____

4. Were there topics which you feel should have been included in this session? If so, would you please list them.

_____

_____

_____

5. Have you other suggestions which would have increased the value of the second session?

_____

_____

_____

THIRD SESSION:

1. Please evaluate both the CONTENT and the PRESENTATION of each of the presentations in this session.

	CONTENT	PRESENTATION
Expanding Alternatives for Teacher Education Students	_____	_____
Strategies for Implementing Career Education	_____	_____

2. In terms of your knowledge of Career Education, how would you rank the information contained in this session? _____

3. Please evaluate the amount of time provided during this session for discussion and questions. _____

4. Were there other topics or subjects which might have been included in this session?

_____

_____

_____

5. Have you other suggestions which might have been implemented in order to increase the value of this third session?

_____

_____

_____

OVERALL:

1. What do you feel was (were) the weakest aspect(s) of these seminars?

_____

_____

_____

2. What do you feel was (were) the strongest aspect(s) of these seminars?

_____

_____

_____

3. Please identify the most relevant topic of these seminars in terms of your interest and knowledge of Career Education.

_____

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS FORM.
PLEASE DO NOT SIGN.

Charles W. Ryan

APPENDIX E

APPLICATION FOR INTERNSHIP
IN
COMPREHENSIVE CAREER EDUCATION PROJECT
COLLEGE OF EDUCATION

NAME_____ DATE_____

ADDRESS_____

PHONE_____ CLASS_____
(Jr., Sr.)

MAJOR_____ G.P.A._____

Will you complete your student teaching experience before the Spring Semester?

Yes_____ No_____

If yes, briefly describe your assignment, including school, subject, grade level, and immediate supervisor.

Please list previous non-academic work experience.

Have you completed any Career Education Mods? Yes_____ No_____
If yes, please describe.

Briefly explain why you wish to take part in the Comprehensive Career Education Project (250 words or less). Use separate sheet of paper and attach to this application form.

Return completed application and an unofficial copy of your most recent transcript(s) to: Dr. Charles W. Ryan
Professor of Education
University of Maine
114 Shibles Hall
Orono, Maine 04473

Return no later than October 10,1975.

APPENDIX F

TEACHER EDUCATION TRAINING SEMINAR

PARTICIPANT REACTIONS

Of those professors who attended the Teacher Education Seminars, and completed the Seminar Evaluations, only thirty-one percent had received formal training in Career Education, and only twelve percent were involved in Career Education on a full-time basis.

In general, the evaluations for the first session, on all three campuses ranged from good to excellent, with the Presque Isle seminar participants evidencing a marked degree of enthusiasm in all of the evaluation areas. The first session received an over-all high rating for the content of the sessions as well as the value attributed to the various printed materials provided to supplement the presentations. Of particular note was the usefulness of K.B. Hoyt's "An Introduction to Career Education" as an assist in providing a definition and rationale for Career Education. In all, the three groups responded to the first session by way of stating that there was excellent depth, definition and length vis-a-vis the objectives of the session.

The evaluation of the second session, although highly rated in the three locations, offered a greater range of perceptions than did the first session. The evaluations for the "Career Education in the Elementary School" presentations ranged from good to excellent. However, the evaluation of "Career Education in the University" was disappointingly low, particularly in the area of content. Of the three content areas of evaluation: "Career Education in the Elementary School," "Career Education in the Secondary School," and "Career Education in the University," both the content and mean scores for the presentation "Career Education in the Elementary School" received the most favorable evaluation. Upon comparing the evaluation for the three locations, the Orono campus evaluations were consistently higher in all areas with the general concensus that the over-all quality was excellent. Both the Orono and the Presque Isle groups noted that they would suggest more emphasis upon University Career Education strategies and concepts in future presentations.

The third session was highly rated by the three groups, with both the content and presentation of the topic "Strategies for Implementing Career Education" receiving excellent ratings. Also, the three groups ranked the information from this third session as excellent in terms of their previous knowledge of Career Education. All three groups expressed a desire to spend more time in examining information concerning the topics included in this session.

In summary, the evaluation of the three sessions for the three campuses, indicated an increase in cognitive knowledge about career education and a positive reaction to the concept. The high quality of printed materials was singled out in the three sessions. Suggestions for future seminars included more time for discussions, more information concerning Career Education, and increased emphasis on how to infuse Career Education into the University setting.

APPENDIX G

Career Education In-Service Participants

Name	Grade or Subject	No. Students	School
Linda Rooks	Kindergarten	43	Fruit Street
Cathy D'Errico	1	28	Mary Snow
Linda Piper	1	20	Fairmount
Marylu Lane	2	20	Fruit Street
Nancy Mockler	3	26	Fairmount
Beth Supranovich	3-4	19	Abe Lincoln
Carol Parks	4	29	Vine Street
Joanna Parsons	5	22	Downeast
Beth Boynton	5	18	Vine Street
Frank Gardiner	6	22	Harlow Street
Betty Cary	6	22	Mary Snow
Paula Tingley	6	25	Harlow Street
Laura Weissman	Elem. L.D. class	6	Harlow Street
George Gorham	Elem. Guidance		Vine Street
Gary Gallant	Spec. Ed. (Jr. High level)	15	Fourteenth St
Annette Roberts	Spec. Ed. (Age 8-11)	15	Fourteenth St
Wayne Willette	Jr. High English	16,20,21,21,28	Fifth Street
Barbara Parker	Jr. High English	23,8,23,21,29	Garland Stree
Jerry Lynch	Jr. High Social Studies	30,20,18,29,28	Fifth Street
Lila Richmond	Jr. High Social Studies	25,27,27,19,19	Union Street
Deale Salisbury	Jr. High Social Studies	28,26,22,22,23	Union Street
Al Winslow	Jr. High Math.	26,26,26,22,16	Union Street
Cindy Sturgeon	Jr. High French	27,28,19,30,29	Fifth Street
Dot McMahan	Jr. High Reading	13,49,21,40,14,14	Fifth Street
Gloria Smith	Jr. High Typing	12,15,10,16,6,11	Garland Stree
Charles Tracy	Jr. High I.A.	10,11,4,11,7,11	Union Street

APPENDIX G

Name	Grade or Subject	No. Students	School
Anne Corson	Jr. High Guidance		Union Street
Richard Woodsum	Jr. High Guidance		Garland Street
Virginia Booth	Sr. High English	27,27,28,26,11	Bangor High
Patricia Sirois	Sr. High Social Studies	17,12,27,31,24	Bangor High
Jo McAlary	Sr. High Math.	26,25,27,25,17	Bangor High
Anne Brann	Sr. High Math.	26,29,24,26,26	Bangor High
Michelle Pulley	Sr. High Program for the Disadvantaged	10,10,10,13,21	Bangor High
Irvin Krupke	Sr. High I.A. (Drafting)	22,20,16,11,12	Bangor High
Gerald Ballanger	Sr. High Guidance		Bangor High

APPENDIX H

CAREER EDUCATION IN-SERVICE
WORKSHOP SCHEDULE

Workshop 1 — October 8

Morning Session
Introduction, Nona Thompson, Phil Gonyar
Orientation to Project - Dr. Charles Ryan
South Portland Teachers' Demonstration of Comprehensive Career Education Program

Afternoon Session - Field Trip to Bangor Daily News

Workshops 2, 3, 5, 6, 7, 8, 9, 10 will have the following format:

8:00 - 8:30	Coffee
8:30 - 9:15	Presentation from UMO or community speaker (speakers listed on appropriate dates below)
9:15 - 10:00	Exercises relating to content of first hour
10:00 - 10:10	Break
10:10 - 11:00	South Portland Demonstration of Use of Theory or Element in the Classroom
11:00 - 12:00	Small Group Work
12:00 - 1:00	Lunch
1:00 - 3:00	Individual and/or Group Work for Preparation of Classroom Materials

Workshop 2 — October 22
Self Awareness - Dr. Donna Brown - UMO

Workshop 3 — November 5
Career Awareness - Dr. Charles Ryan - UMO
Materials & Information (P.M.) South Portland Staff

Workshop 4 — November 19
Visitation to South Portland - Project REVAMP

Workshop 5 — December 3
Career Awareness - Dr. Charles Ryan - UMO

Workshop 6 — December 17
Appreciation and Attitudes - Dr. James Miller - UMO

Workshop 7 — January 21
Education Awareness - Dr. Charles Ryan - UMO

Workshop 8 — February 4
Economic Awareness - Dr. James Miller - UMO

Workshop 9 — February 25
Beginning Competencies and Employability Skills - Speakers from Maine Employment Security Commission, Maine Department of Manpower Affairs

Workshop 10 — March 10
Community Involvement - Speakers from Local Businesses, Cooperative Education Teachers and Work Experience Program Teachers

Workshops 11 & 12
Visitation Days to be Arranged

Workshop 13 — April 7
Roundtable - Project Advisory Committee Report - Evaluation

Workshop 14 — April 14
Evaluation & Wrap-Up

APPENDIX H

January 21 Career Education Workshop

Educational Awareness

8:00 - 8:15 - Coffee and doughnuts

8:15 - 9:15 - Presentation by Dr. Ryan

9:15 - 9:45 - Discussion

9:45 - 10:00 - Break

10:00 - 11:45 - Demonstrations from So. Portland team

11:45 - 1:00 - Lunch

1:00 - 3:00 - Grades K-3 - Infusion techniques - Room 203 - Dr. Ryan

Grades 6-9 - Self Incorporated Presentation - Conference Room - Bruce Spang

Grades 10-12 - Sr. High special projects & Material Preparation - Mrs. Robetts Office - Dr. Miller

A-V workshop - Basic Equipment Usage, Preventive Maintenance - A-V lab - Don Gould

Anne Brann
Jo McAlary
Gloria Smith
Paula Tingley
Dick Woodsum
Charles Tracy
Linda Rooks
Laura Weissman
Ann Corson

CAREER EDUCATION: WHAT IS IT?

&

WHY WOULD I WANT IT?

A Handbook For Teachers

Nona L. Thompson
Career Education Consultant
Comprehensive Career Education Project
Bangor School Department
Bangor, Maine

"I will not push a small child into making a job choice!"

"Career education has nothing to do with me. I'm a science teacher."

"Career education sounds like a good idea, but I just have too much to do already."

"Not another subject to cram into our crowded curriculum!"

"That's a job for the school counselors."

All of these statements have been made by thousands of teachers who have a misconception of what career education really is. Career education will not force small children into a career choice, it is a valuable tool for science teachers, it does not require extra time or involve squeezing in a separate curriculum, and counselors alone cannot carry on an effective career education program. Career education has come about because our students have demonstrated a lack of preparation for life after school. They are unaware of the variety of options available, are unprepared to make decisions and lack many of the skills required outside the academic situation.

Elementary students try out their manipulative skills in a food services operation.

What Is Career Education?

Career education is not another new curriculum designed to replace or radically alter the existing one. It is a concept based on eight basic elements to be infused when appropriate into the existing educational program. It should be noted that only two of these eight elements directly relate to careers; the elements are designed to work with all the interrelated components that effect one's selection of life career roles.

Whatever one's definition of career education, it is agreed that the process of career education must be sequential and developmental to be most effective. It must begin in kindergarten and carry on throughout one's entire life education to meet the needs of people in today's continually changing societal patterns and environment.

A ninth grader works for a day with a physical therapist.

The Sequential, Developmental Process

Grades K-6 - Awareness level

During this period much emphasis is placed on the concept of self, its relationship with other people, its relationship to school, and its relationship to the work world. All elements tie in so that a child, as he progresses through the early grades, develops an overall awareness of each component of career education.

Grades 7-9 - Exploration level

Exposure to the career education elements is more thorough and intense. The child begins to seriously explore the variety of life styles, the work world, and all opportunities available to him. He will make some important decisions concerning his life career goals in respect to educational and occupational focus.

Grades 10-12 - Preparation and Implementation level

The student will prepare for further education and/or develop entry level competencies in a particular occupation which will correlate with his chosen life style.

Adulthood

The individual is involved in some form of higher education or employment. During this time, he or she will probably change jobs several times and require some form of further education or training in order to adapt to the ever changing job market.

Senior high school students are developing competencies for careers involving drafting skills.

The Eight Elements & Outcomes

Of Career Education

All elements are an integral part of the school curriculum and are infused into the curriculum at each grade level, K-12, according to that grade's level of development and sophistication.

The elements and outcomes of career education are the following:

Element 1

Self Awareness --- leads to --- Self Identity

The student will become aware of himself, his needs, strengths, and personal likes and dislikes so that he may develop self knowledge and a positive self identity which will aid him to make effective life career decisions.

Element 2

Educational Awareness --- leads to --- Educational Identity

The student will recognize:

A. the significance of basic skill development and the mastery of content knowledge as a means of achieving career goals.

B. that different career directions require varying types of educational preparation.

C. that education is continuous, occurring in and outside of school.

Element 3

Career Awareness --- leads to --- Career Identity

The student will recognize that his career development includes progression through stages of education and occupational experiences, will understand the variety of occupations found in the world of work and the relationship between career and life-style.

Element 4

Economic Awareness --- leads to --- Economic Understanding

The student will understand:

A. the way in which occupations relate to needs and functions of society.

B. the relationship between personal economics, life-styles and occupations.

C. the range of social and economic benefits associated with various occupations.

D. basic economic concepts so that he may utilize them to best meet his life goals.

Element 5

Decision-Making --- leads to --- Career Decisions

The student will understand that decision-making includes responsible action in identifying alternatives, selecting the alternatives most consistant with his goals, and taking steps to implement the course of action. He will become proficient in using resource information to make career decisions.

Element 6

Beginning Competencies --- leads to --- Employment Skills

The student will develop basic cognitive skills plus the skills required to identify the objectives of a task, specify resources required, outline procedures, perform operations, and evaluate the product so that he may be effective in the work world.

Element 7

Employability Skills --- leads to --- Career Placement

The student will develop abilities required to find, secure, and maintain employment. He will develop work habits and attitudes necessary to enter an occupation in the career area of his choice.

Element 8

Appreciation & Attitudes --- leads to --- Self-Social Placement

The student will recognize the responsibility to himself and others when accepting a task or job. The student will recognize individual differences and become tolerant in his interpersonal relationships. By doing so, the student will best know how to place himself in working and social situations.

At every grade level, specific goals for each element are set so that each student experiences a sequential, developmental process whereby he develops profiency in the eight elements.

Community Involvement

One of the key components to career education is an effective liaison between the school and business communities. When studying the different careers and life styles available, involving parents and workers provides an excellent resource for the classroom. Field trips to and job shadowing experiences in a wide realm of careers give students a clearer picture of the options available in the work world and enable them to explore their own interests, aptitudes, and values so that they may later make wise, satisfying life/career decisions.

Junior high students observe workers at a local veterinary hospital.

Resources Available in the

Bangor School Department

The career education resource room is housed in Room 203 at the Harlow Street School. The resources are available on a loan basis to all Bangor teachers. Complete listings of the materials are available at the resource room.

CAREER RESOURCE ROOM
Room 203
183 Harlow Street
947-6711 Ext. 41

APPENDIX J G. Ballanger Gerald E.

Bangor Public School Career Education
In-Service Program, 1975 - 76

Final Evaluation by Participants
Applying for Recertification Credit

1. Consider this course as a whole and rate it using the following scale: (circle one)

   (5) Excellent
   4 Good
   3 Fair
   2 Unsatisfactory
   1 Let's not have another one like this

2. Activities which were the most beneficial. Rank order (#1 is considered most beneficial)

   4 Background lectures

   1 Activities associated with lecturer (magic circle, Work Values Inventory, group leadership, etc.)

   2 South Portland demonstrations

   3 Community people panels

   5 Field trips

   6 Job shadowing

   7 Independent study time

   ___ Other (please specify)

3. Did the course meet your needs?

   ✓ Yes

   ___ No

   ___ Partly

4. Skills you have developed through this in-service program.

   A better understanding of career education as it relates to the total school program - as a guidance counselor I have a better understanding of my role in career education on the secondary level.

5. How did you feel about career education prior to this program?

My background in career education was limited. Much of my time at BHS- is devoted to academic counseling and crisis situations - didn't fully realize the importance of a career education program.

6. How do you feel about career education after completing the program?

I fully realize the importance of career education from K to 12- especially on the secondary level.

7. Your future plans regarding career education for next year.

I feel that a career education resource room will be available at BHS. - with the possibility of a shared campus we will be able to implement a career education program. (at least minimum)

8. Any suggestions you would like to make for a similar type of workshop program next year.

A more concentrated program - every day - 3 or 6 weeks session - more exhibits or concentrated resources.

9. Additional Comments:

One of my best experiences during my 22 years in the Borger School System.

Gerald E Ballenger
Counselor
Borger H. S.

Mrs. Virginia Foye Booth
Bangor High School

APPENDIX J

Bangor Public School Career Education
In-Service Program, 1975 - 76

Final Evaluation by Participants
Applying for Recertification Credit

1. Consider this course as a whole and rate it using the following scale: (circle one)

   (5) Excellent
   4 Good
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   1 Let's not have another one like this

2. Activities which were the most beneficial. Rank order (#1 is considered most beneficial)

   5 Background lectures

   4 Activities associated with lecturer (magic circle, Work Values Inventory, group leadership, etc.)

   1 South Portland demonstrations

   1 Community people panels

   3 Field trips

   2 Job shadowing

   6 Independent study time

   ____ Other (please specify)

3. Did the course meet your needs?

   ✓ Yes

   ____ No

   ____ Partly

4. Skills you have developed through this in-service program.

   Communication skills with other teachers and members of the community

   Perception skills — awareness of what occurs in the business community

5. How did you feel about career education prior to this program?

I had never [illegible] by name, and was amazed that I have been doing many activities particularly, values and attitudes for years. I have found that this course has helped me develop positive materials for my neglected students - the non college oriented.

6. How do you feel about career education after completing the program?

I feel this is one of the important facets of any educational program today. I also believe it should be an on going concept which should be infused into the whole system from K-12

7. Your future plans regarding career education for next year.

Formulate plans for procuring and staffing materials and people a career resource center at the High School by Fall of '76
Infuse career education activities into my classes as I have been this year, only to a greater extent

8. Any suggestions you would like to make for a similar type of workshop program next year.

Utilize this years trainees in the same capacity, as we used South Point, & to expand career ed into the Boyer system.

9. Additional Comments:

I am seriously considering going on beyond my Masters and becoming qualified as a counselor in Career Ed.

Betty K. Curry

APPENDIX J

Bangor Public School Career Education
In-Service Program, 1975 - 76

Final Evaluation by Participants
Applying for Recertification Credit

1. Consider this course as a whole and rate it using the following scale: (circle one)

(5) Excellent
4 Good
3 Fair
2 Unsatisfactory
1 Let's not have another one like this

2. Activities which were the most beneficial. Rank order (#1 is considered most beneficial)

4 Background lectures

1 Activities associated with lecturer (magic circle, Work Values Inventory, group leadership, etc.)

2 South Portland demonstrations

5 Community people panels

3 Field trips

6 Job shadowing

7 Independent study time

____ Other (please specify)

3. Did the course meet your needs?

✓ Yes

____ No

____ Partly

4. Skills you have developed through this in-service program.

Ability to integrate career education activities into the basic curriculum. I have learned how to find materials suitable for use with children.

5. How did you feel about career education prior to this program?

Interested in the area but inadequate about how to approach the integration into regular classroom activities.

6. How do you feel about career education after completing the program?

Very interested and gaining competency with practice with suggested activities

7. Your future plans regarding career education for next year.

I hope to expand the activities for class participation.

8. Any suggestions you would like to make for a similar type of workshop program next year.

Background lectures are quite important in understanding the concepts but perhaps they could be made to include more simple activities

9. Additional Comments:

that can be used in classrooms with children. (Not quite so much theory.) More time to prepare materials for classroom use

APPENDIX K

ABSTRACT: MAINE STATE PLAN FOR CAREER EDUCATION
PROPOSAL TO U.S. OFFICE OF EDUCATION for Federal funds, under Public Law 93-380 Sec. 406.
DIRECTOR: Mrs. Marion Bagley
TIME FRAME: July 1, 1976 - June 30, 1977

NEED: Since 1970 over fifty career education projects have been funded, yet no uniform system of coordination and/or implementation has been formulated. With adoption of a State Plan, Maine would accept its responsibility for educational reform for the entire student population of the state. Statistics show Maine's dropout rate of 9.7% as compared to the national average of 7.8%. Clearly, a commitment must be made by the state to assume a leadership role essential in initiating change.

GOAL: A comprehensive Career Education State Plan structured to meet the needs of the students of Maine, to be submitted for approval to the State Board of Education.

OBJECTIVES:

1. Conduct mini-conferences to provide a forum for exchange of ideas and information as to how the Department could best respond to the needs of the various segments of Maine's population; to promote an understanding of career education concepts and to gain support for the expansion of the career education movement.

2. Create a resource directory of resource people.
3. Sponsor a one day career education conference at two state cites.

APPROACH: The commissioner will appoint a State Career Education Advisory Committee, with representatives of areas as required by USOE Guidelines, who will work cooperatively with the Director and in conjunction with State Department of Education and Cultural Services. They will be authorized to move across state levels to establish communication between state and local business as well as educational agencies and labor/industrial community.

NEEDS ASSESSMENT: One component of the needs assessment instrument would be found in the results of the Maine Assessment of Educational Progress, which has already been contracted with the National Educational Assessment. In year 05 of this program the goal is to "assess the area of career and Occupational Development." A second component would be a survey conducted with assistance of guidance personnel to study high school students who had left secondary schools between July '71 and June '73. Such research would indicate those aspects of their education each found beneficial or wanting.

MINI-CONFERENCES: Project director will conduct three mini conferences in each of the seven Vocational Planning Districts which closely follow the State Planning Districts and which are used as a convenient base division of all educational/business/community activities within the state. Each conference of 35 participants would be structured: first the professional and educational personnel; then the leaders of business, industry, and labor followed by one for local boards and the community. Such groupings around the state will provide the opportunity for intense discussion among peoples (approximately 735) of similar interests. Hopefully the results will also reflect the rural-urban interests as well.

Planners will research the findings of other states, and study the results of the assessment and the survey. This material combined with the recommendations of the 21 mini-conferences would serve to produce information needed to draft the state model.

APPENDIX L

COMPREHENSIVE CAREER EDUCATION PROJECT

Bangor, Maine

EVALUATION

January 1, 1976 - May 31, 1976

Theodora S. Sotiriou - South Portland Coordinator

The January through April workshops in Bangor continued in the same successful vein as the first half year. The South Portland teachers and counselors continued to present and share career education experiences with their Bangor counterparts. Both school systems continued to benefit from this professional exchange. The only disappointment voiced by all participants - presenters and audiences, alike - was lack of time. The consistently positive attitude of Bangor participants made it easy and comfortable for the South Portland teachers.

The phenomenal growth of career education among the Bangor staff and teachers is evidenced by their enthusiastic presentations and modeling at Boston, Brewer, Limestone and even in South Portland.

This evaluation includes the four workshops in Bangor, one presentation at the University of Maine in Augusta, and a South Portland group visit to Bangor.

January 21	Bangor	Education Awareness 8 South Portland Consultants

The South Portland strategy was to zero in, not only on education awareness for students but also for teachers. Because the majority of educators have a strong academic background, with little business and industry experience, the Career Guidance and Mathematics Careers Institutes were presented for elementary and secondary teachers, respectively. Secondary teachers responded exuberantly to role playing in a junior high education awareness class activity. Four small groups, K-12, experienced combinations of the following: super 8 movies, worksheets, slides, lectures and discussions. All South Portland participants stated their audiences were enthusiastically receptive.

February 4	Bangor	Economic Awareness 8 South Portland Consultants

The economics presentations ranged from very basic to quite technical. From the kindergarten teacher to high school economics instructor, ideas, units and resources were shared. All teachers were most appreciative of the many addresses provided for free and inexpensive materials.

March 10 — Bangor — Community Involvement
9 South Portland Consultants

Because this topic overlapped greatly with presentations in previous workshops dealing with the eight career education elements, this session was simply a sharing of more activities and ideas involving community resources in and out of the classroom. The secondary Bangor people were so impressed with the "On The Rocks" magazine produced in a South Portland High School English class, they ordered 21 copies of the spring issue. Teachers also were very impressed with the high school student who helped with the magazine presentation.

Surveys were made to determine the use of community resources by project teachers, in order to identify information necessary to set up a file.

April 8 — Bangor — Decision Making
5 South Portland Consultants

Decision making had been interwoven into several workshops. While Dr. Ryan worked with elementary teachers, the secondary teachers heard the background, goals, execution and reactions of South Portland's sophomore decision making unit.

Small groups worked on designing the format for a community resource file. Several individuals promptly volunteered to work with Nona on developing a useful system for disseminating the information.

April 28 — Augusta — South Portland Career Education Overview
4 South Portland Consultants

The Orono presentation resulted in a request for the South Portland career education staff to make a presentation to a graduate class at University of Maine in Augusta. It is hoped that more concern and activity of this type will be evidenced on the college campuses.

These five programs involved 34 consultant days bringing the total for the year to 112 South Portland personnel and one student. A two page list of specific involvement is at the end of this report.(See Exhibit A)

May 19 — Bangor — Classroom Visits
23 South Portland visitors

This is one of the best experiences for educators. Twenty-three South Portland teachers, career education staff members and administrators visited Bangor project teachers. Career education-wise or just general education-wise this type of exchange is priceless. Here South Portland reaped more rewards of this reciprocal contract. Some teachers were visiting and observing another school system for the first time in their teaching career.

By working with Bangor, South Portland was able to save them a great deal of time in research and implementation. It is natural to wonder how much more could also have been accomplished if another school system had been available to model for South Portland in 1973-74.

Bangor and South Portland are similar in school enrollment, business community accessibility, sociologically and economically. This certainly enhanced the success of the model strategy.

The workshop strategy of theory-practicum combination is excellent.

The three pronged state, university and school system approach touches all bases to establish a uniform concept of career education and a process of implementation throughout the state.

Bangor is definitely not the only school system which benefitted from this project. They were most generous in welcoming guests to their workshops. Some State Department of Education personnel and surrounding community educators attended regularly. These state and university components will have a great influence throughout Maine.

All South Portland prepared workshop materials were used for both school systems. Either the material was in existence due to previous South Portland implementation, or having devised presentations especially for Bangor, these materials were then disseminated to South Portland teachers.

South Portland, through this contract, had the means to acknowledge the hard work and professionalism of some of its many excellent teachers. Their commitment to career education was reaffirmed as a result of their participation.

The future of career education in Bangor rests in many areas. Without doubt, project teachers have experienced a growing commitment, and career education will remain an integral part of their teaching.

Vital to the success of any educational process are two factors - a united, dedicated teaching force and openly supportive administrators. Each building principal is the key to positive, comfortable feelings teachers have concerning their activities and ideas. Continued staffing, perhaps reduced in number from the original career education staff, is necessary. Bangor still needs people and time to organize and disseminate project ideas and materials. Under the direction of a career education staff, this year 33 Bangor participants will now be able to model for the remainder of the Bangor staff. A great deal of time and organization is necessary to represent all career education elements in each subject area and at all grade levels. This is no easy chore, but it is a must in thoroughly orienting educators to the goals, objectives and implementation of career education.

Sincerest thanks and congratulations are due Dr. Ryan for devising this most creditable plan for Maine. The Bangor Board of Education is to be commended for their support of this program. Dr. Miller's organizational talent and consistent concern have been significant factors in the success of the workshops and overall project. Phil Gonyar's dedication and concern go a long way in the present and future plans for career education in Bangor. (See Exhibits B and C for Bangor's administrative comments regarding South Portland's workshop participation.)

Nona Thompson has been a competent, conscientious leader in Bangor. The card from her own project teachers says it perfectly, "Without you, we would never have been so infused.....or enthused!" Bangor owes her a debt of gratitude for her totally professional manner. She has been a constant source of inspiration and encouragement to the project teachers.

All in all, Bangor has had a consistently hard working team. Personally and professionally, it has been a privilege to work with them. I extend my sincerest thanks to the South Portland and the Bangor Board of Education and administrators for allowing me this opportunity.

Exhibit A

COMPREHENSIVE CAREER EDUCATION PROJECT

SOUTH PORTLAND PERSONNEL CONSULTANT DAYS

PART I

Overall participation of South Portland personnel is summed up in the following charts.

A. Total South Portland Consultant Days

First Half Year		Second Half Year	
In South Portland	16	In South Portland	—
In Bangor	56	In Bangor	29 + 1 student
At University	7	At University	4
	79		33 + 1 student

Total - 112 South Portland personnel and 1 South Portland student

* *

B. Tally of Different South Portland Personnel

First Half - 36 different South Portland staff members

4 Administrators 8 Career Education Staff 5 Counselors
12 Elementary teachers 7 Secondary teachers

Second Half - 22 different South Portland staff members and one student

1 Administrator 4 Career Education Staff 1 Counselor
10 Elementary teachers 6 Secondary teachers 1 Student

Total - 52 different South Portland staff members

4 Administrators 8 Career Education Staff 6 Counselors
21 Elementary teachers 13 Secondary teachers

SOUTH PORTLAND PERSONNEL CONSULTANT DAYS (continued)

PART II

Following is a list of individual participants for each session at South Portland, Bangor and University campuses.

In South Portland

September 29	6 Consultants - Freise; Sotiriou; Cruise; Roberts; Goodell; Roper
October 14	1 Consultant - Sotiriou
November 19	9 Consultants - Full day consultants Freise; Sotiriou; Cruise; Roberts; Theriault; Egers, Corcoran; Goodell; Roper

In Bangor

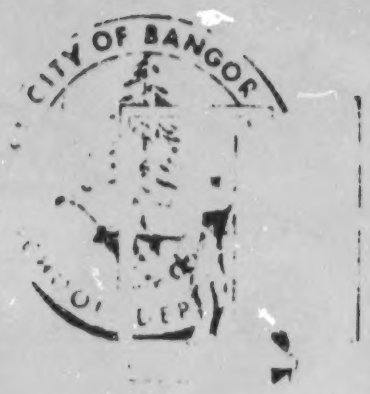
August 26	8 Consultants - MacLeod; Freise; Roberts; Sotiriou; Cruise; Hemond; Mack; King
October 8	5 Consultants - MacLeod; Freise; Sotiriou; Roberts; Hemond
October 22	9 Consultants - Freise; Sotiriou; Cruise; Tordoff; Paquette; Corcoran; Pillsbury; Carroll; Braley
November 5	14 Consultants - Freise; Sotiriou; Roberts; Mack; Mezoian; Roper; Goodell; Hill; Barth; Jordan; Egers; Kendrick; McIntyre; Cavellier
December 3	13 Consultants - Freise; Sotiriou; Cruise; Roberts; Dunn, R. Kinney; Bridges; Towle; Adams; Egers; Searway; Norton; Whitcomb
December 17	7 Consultants - Sotiriou; Cruise; Hemond; Corcoran; McDonald; Lyon; Mooney
January 21	8 Consultants - Freise; Sotiriou; Carr; Thombs; Theriault; Caldwell; Eastman; Pillsbury
February 4	7 Consultants - Freise; Sotiriou; Ramsey; Chapin; McCabe; Berry; Edwards
March 10	9 Consultants + 1 student - Freise; Sotiriou; Cruise; Hirsch; Maillet; Cote; Horr; Pettee; Clark; student - Campbell
April 8	5 Consultants - Freise; Sotiriou; Cruise; Roberts; Flynn

University Presentations

December 2	University of Maine/Gorham - 4 Consultants - MacLeod; Freise; Sotiriou; Roberts
December 9	University of Maine/Orono - 3 Consultants - MacLeod; Sotiriou; Roberts
April 27	University of Maine/Augusta - 4 Consultants - Freise; Sotiriou; Cruise; Roberts

4/30/76 - Sotiriou

Exhibit B



BANGOR SCHOOL DEPARTMENT

183 Harlow Street Bangor, Maine 04401

Telephone 207-947-6711 Ext 31

April 29, 1976

Mr. John S. Seekins
Superintendent of Schools
South Portland, Maine

Dear John:

This morning I received a complete verbal report on our Career Education Project from Nona Thompson, our consultant, and Phil Gonyar, Assistant Superintendent for Instruction. The workshops for this year are completed and I wanted a comprehensive report.

Both Nona and Phil spoke in the most glowing terms of the excellent work the South Portland teachers and administration have contributed to our project. They were admiring of the way Career Education is succeeding in South Portland and the enthusiasm of all personnel connected with it. They were especially impressed with the friendly, cooperative and helpful attitude of all your people.

I want you to know this and I hope that you will not only accept my thanks for your cooperation but also pass along to those most directly responsible my hearty congratulations and warm appreciation for the excellent help they provided us.

Sincerely,

Wendell G. Eaton
Superintendent of Schools

WGE:eg

Exhibit C

BANGOR SCHOOL DEPARTMENT

183 Harlow Street - Bangor, Maine 04401

Telephone 207-947-6711 Ext. 36x 42

April 8, 1976

Dr. John Seekins
Superintendent of Schools
South Portland, Maine
04106

Dear John,

The South Portland educators who have been assisting us in our career education project have been uniformly excellent. Not only have they demonstrated their expertise but also they have exhibited true enthusiasm for what they do. The project would not have reached a high level of success without their participation.

I would especially like to commend Terry Sotiriou and Fred Priese for their leadership and extensive involvement. Several of your staff members, for example, Ruth Roberts, Mary Cruise, and Andy Hemond have worked more frequently than others with our participants. They are so highly regarded that our staff would have liked them to be here each time.

You should know that our thanks is hearty and sincere. We are highly appreciative that you permitted this interchange.

Sincerely,

Phil Gonyar

Philip A. Gonyar
Assistant Superintendent
for Instruction

APPENDIX M
SUMMARY OF FINAL EVALUATIONS
OF IN-SERVICE WORKSHOPS
BY BANGOR TEACHERS

Bangor Public School Career Education
In-Service Program, 1975 - 76

Final Evaluation by Participants
Applying for Recertification Credit

1. Consider this course as a whole and rate it using the following scale: (circle one)

5 Excellent (28)
4 Good (4)
3 Fair
2 Unsatisfactory
1 Let's not have another one like this

2. Activities which were the most beneficial. Rank order (#1 is considered most beneficial)

FINAL RANKING:
This is the rank order as determined by all participating workshop teachers.

6 Background lectures

2 Activities associated with lecturer (magic circle, Work Values Inventory, group leadership, etc.)

1 South Portland demonstrations

3 Community people panels

4 Field trips

5 Job shadowing

7 Independent study time

x Other (please specify)

3. Did the course meet your needs?

29 Yes

____ No

3 Partly

4. Skills you have developed through this in-service program.

_____

_____

_____

_____

SUMMARIZED COMMENTS FROM THE FINAL WORKSHOP EVALUATION:

1. As a result of the career education project the workshop participants indicated development of beginning competencies in the following areas and/or skills:

   a. an awareness and understanding of the elements of career education

   b. an awareness and understanding of the techniques of interviewing, field trips, job shadowing, values clarification and use of community resources

   c. an awareness and understanding of the concept of curriculum infusion.

2. Concerning the participants' knowledge and feelings concerning career education prior to the project, most teachers had unformed and varied views. Some of the commonly mentioned teacher comments were as follows:

   a. We felt career education was for the upper grades only.

   b. We did not understand the principles of career education.

   c. We did not know how to approach it in our classrooms.

   d. We had career education confused with vocational education.

   e. More emphasis should be placed upon career education but we did not know how to go about it in the classroom.

3. As a result of the project, all teachers expressed a positive feeling toward career education. All indicated a desire to see career education continue as an on-going project in Bangor. All felt they had gained competencies in career education. All expressed a desire to see career education infused into the curriculum of the Bangor Schools.

4. Concerning the participants' future plans for career education, the following were mentioned:

   a. All participants expressed a desire to infuse career education elements and activities into their particular courses next year.

   b. Most participants indicated that they would make more and better use of community resource people, parents, field trips and job shadowing.

c. Most participants expressed a desire to see the establishment of a central career education resource center or individual school resource center or both.

d. Many participants expressed a desire to see career education elements infused into the guidance program as well as the curriculum.

e. Several participants expressed a desire to pursue additional training in career education courses at the university and at career education workshops if they are available.

5. The participants suggested the following with regard to a workshop program for next year:

a. All suggested the training of a new group of teachers.

b. Many suggested a more intensive training for this year's group of teachers.

c. Use this year's group of teachers as resource people and workshop staff members next year.

d. Make continued and additional use of the community regarding panels with local business people, job shadowing, field trips.

e. The possibility of a career guidance institute made up of teachers from this year's group.

SUMMARY OF EVALUATIONS OF
INDIVIDUAL IN-SERVICE WORKSHOPS

WORKSHOP FORMAT: Indicate degree to which you agree or disagree with each statement:

SA - strongly agree
A - agree
U - undecided
D - disagree
SD - strongly disagree

	SA	A	U	D	SD
a. As a result of today's presentation, I have a better understanding of the meaning of this element.	108	131	19	4	
b. I have received some practical suggestions about how I can implement this element in my classroom.	74	124	38	6	2
c. I plan to try an activity related to this element in my class sometime during the next two weeks.	64	111	63	3	3
d. Adequate time was allowed for discussion purposes. (If disagree, circle one of the following: too much / too little).	58	131	18	41	6
e. The workshop personnel created an atmosphere in which I felt free and comfortable to ask any questions that I had.	129	127	3	2	1

Please check your response to the following items:

F. Did the content of this workshop generally hold your interest?

175	Highly interesting	17	Slightly Boring
68	Somewhat interesting	1	Continuously Bored

Comments:

G. This workshop:

4	Assumed too much knowledge
11	Assumed too little knowledge
231	Seemed at the appropriate level of sophistication
12	Assumed more knowledge than I had, but I was not lost by presentation of materials.

Comments:

H. How effective were the project staff members in relation to their topic?

148	Very effective	16	Somewhat effective
91	Effective	2	Weak

Comments:

I. How effective were the South Portland staff members in relation to their topic?

142	Very effective	19	Somewhat effective
61	Effective	--	Weak

Comments:

SUMMARIZED COMMENTS FROM THE INDIVIDUAL WORKSHOP EVALUATIONS:

1. The participating teachers stressed that a most important part of the workshops was the presentation of specific, practical career education ideas, materials and activities by the staff members and the participants from South Portland School Department. They were impressed by the presentations and the small group discussion that stressed specific hands-on activities.

2. The participating teachers were very impressed with the sessions dealing with community contact. Panel discussions involving local business people, job shadowing experiences and local educational and business field trips were well received by the workshop teachers.

3. Concerning future workshops sessions and suggestions for improvement, the participating teachers suggested the following:

   a. Additional discussion and development of career education techniques, ideas, materials and activities K-12.

   b. Demonstrations and visitations at on-going career education projects outside of the Bangor School system.

   c. Additional contact with the local business community regarding panel discussions, job shadowing and field trips.

   d. The possibility of a career education resource center and the continued availability of a career education consultant and coordinator. Teacher comments in this area stressed the need for a centrally controlled resource center where help and career education resources would be available to all teachers.

   e. Most participating teachers indicated that as a result of the workshops, they would plan and implement career education activities into their individual courses.

APPENDIX N

1975-1976

COMPREHENSIVE CAREER EDUCATION PROJECT

SPONSORED BY

COLLEGE OF EDUCATION
UNIVERSITY OF MAINE AT ORONO
AND
BANGOR PUBLIC SCHOOLS
BANGOR, MAINE

Project Director: Dr. Charles W. Ryan
Professor of Education
College of Education
University of Maine
Orono, Maine 04473
Phone 207-581-2431

INTRODUCTION

The following materials consist of training schedules, report forms, evaluation comments and special materials that were developed for use in the Comprehensive Career Education Project. In some cases, material was adapted from career education projects funded by the U.S.O.E. and several State Departments of Education. In the process of organizing materials we may have inadvertently neglected to cite the author or agency that originally developed the material -- we apologize in advance if this should occur. We hope the materials in this packet are of help to the other seventy-nine projects as they continue their efforts to develop and infuse career education.

Cordially,

Chuck Ryan

IN-SERVICE TRAINING MATERIALS

Career Education Workshop Schedule

Tips for Educators

Suggested Goals for Teacher Education Programs

Suggested Internal Service Program
for Teacher Educators

Teacher Educator Group Exercise

Job Shadowing Assignments

CAREER EDUCATION IN-SERVICE
WORKSHOP SCHEDULE

Workshop 1 — October 8

Morning Session
Introduction, Nona Thompson, Phil Gonyar
Orientation to Project - Dr. Charles Ryan
South Portland Teachers' Demonstration of Comprehensive Career Education Program

Afternoon Session - Field Trip to Bangor Daily News

Workshops 2, 3, 5, 6, 7, 8, 9, 10 will have the following format:

8:00 - 8:30	Coffee
8:30 - 9:15	Presentation from UMO or community speaker (speakers listed on appropriate dates below)
9:15 - 10:00	Exercises relating to content of first hour
10:00 - 10:10	Break
10:10 - 11:00	South Portland Demonstration of Use of Theory or Element in the Classroom
11:00 - 12:00	Small Group Work
12:00 - 1:00	Lunch
1:00 - 3:00	Individual and/or Group Work for Preparation of Classroom Materials

Workshop 2 — October 22
Self Awareness - Dr. Donna Brown - UMO

Workshop 3 — November 5
Career Awareness - Dr. Charles Ryan - UMO
Materials & Information (P.M.) South Portland Staff

Workshop 4 — November 19
Visitation to South Portland - Project REVAMP

Workshop 5 — December 3
Career Awareness - Dr. Charles Ryan - UMO

Workshop 6 — December 17
Appreciation and Attitudes - Dr. James Miller - UMO

Workshop 7 — January 21
Education Awareness - Dr. Charles Ryan - UMO

Workshop 8 — February 4
Economic Awareness - Dr. James Miller - UMO

Workshop 9 — February 25
Beginning Competencies and Employability Skills - Speakers from Maine Employment Security Commission, Maine Department of Manpower Affairs

Workshop 10 — March 10
Community Involvement - Speakers from Local Businesses, Cooperative Education Teachers and Work Experience Program Teachers

Workshops 11 & 12 — Visitation Days to be Arranged

Workshop 13 — April 7
Roundtable - Project Advisory Committee Report - Evaluation

Workshop 14 — April 14
Evaluation & Wrap-Up

TIPS FOR EDUCATORS

The following are basic steps for implementing career education:

Administrators

1. Develop a policy statement on career education.
2. Secure School Board approval.
3. Meet with the Faculty to discuss how you will support the implementation of career education.
4. Read articles, position papers and texts on career education.
5. Appoint a Career Education Advisory Committee with representation from all subject areas.
6. Give career education a high priority.

School Counselors

1. Read articles, papers and texts that discuss the counselor's role.
2. Examine you current guidance program for determination of priorities.
3. Serve on the Career Education Advisory Committee.
4. Spend more time in helping students assess their performance data.
5. Spend more time in helping students find part-time and full-time work.
6. Spend more time in helping students determine what they will do after high school and/or post-secondary education.
7. Help teachers infuse career implications of their subject matter into the teaching-learning process.
8. Give career guidance a higher priority.

Teachers

1. Examine your instructional plans - what percentage is devoted to one or more of the eight career education elements.
2. Be willing to change your behavior.
3. Participate with enthusiasm in in-service efforts to install career education.
4. Read about career education.
5. Collaborate with academic or vocational teachers in planning career education activities.
6. Break the lecture habit -- use field trips, resource people, "hands on activities," and occupational information.
7. Teach good work habits -- being on time, doing a good piece of work, etc.
8. Involve the community in instructional efforts.
9. Give career education a high priority.

Prepared by C.W. Ryan, Professor of Education,
University of Maine, Orono, Maine
2/24/76

SUGGESTED GOALS FOR TEACHER EDUCATION PROGRAMS AND STAFF 1975

As you begin deliberation on institutional committment to career education, the following goals might be of help (developed by the Career Education Council, College of Education, Michigan State University, May, 1974).

1. IMPLEMENT AN INNOVATIVE AND EFFECTIVE PROGRAM OF INSERVICE FOR TEACHER EDUCATION PERSONNEL.

2. ORGANIZE AND MAKE READILY AVAILABLE TO EDUCATORS A RESOURCE CENTER OF CAREER EDUCATION MATERIALS.

3. CONDUCT RESEARCH RELATED TO CAREER EDUCATION AND PROVIDE FOR APPROPRIATE DISSEMINATION.

4. PROVIDE EFFECTIVE INSERVICE PROGRAMS FOR TEACHERS INTERESTED IN DEVELOPING SKILLS IN CAREER EDUCATION.

5. IMPLEMENT CAREER EDUCATION COMPONENTS INTO THE TEACHER PRESERVICE PROGRAM SO THAT EVERY TEACHER WILL HAVE INSTRUCTIONAL SKILLS IN CAREER EDUCATION.

6. OPERATIONALIZE A LEADERSHIP DEVELOPMENT PROGRAM FOR LOCAL PERSONNEL RESPONSIBLE FOR CAREER EDUCATION.

7. DESIGN AND IMPLEMENT GRADUATE PROGRAMS WHICH RESULT IN PARTICIPANTS DEVELOPING ADVANCED COMPETENCIES IN CAREER EDUCATION.

8. PROVIDE LOCAL SCHOOL ADMINISTRATORS WITH INSERVICE OPPORTUNITIES IN CAREER EDUCATION.

9. PROVIDE MANAGEMENT AND PROGRAM ASSISTANCE TO SCHOOLS WISHING TO IMPLEMENT CAREER EDUCATION.

10. PUBLISH MATERIALS, RESEARCH AND OTHER DOCUMENTS WHICH WILL ASSIST OTHERS IN IMPLEMENTING CAREER EDUCATION.

Comprehensive Career Education Project, College of Education, University of Maine at Orono.

SUGGESTED
INTERNAL SERVICE EDUCATION PROGRAM FOR COLLEGE OF EDUCATION FACULTY

Organize a task force committee for career education which is representative of all areas/departments/disciplines which prepare teachers, counselors, and administrators. This task force is charged to accomplish a variety of tasks. Task examples are stated below:

a. Analyze both the present status and future aspirations of teacher preparation programs on campus.

b. Review career education literature, research, models, state exemplary projects and share findings with members of the committee.

c. Visit and assess local educational agencies' needs and concerns regarding career education.

d. Communicate with state educational agencies and review the state plan for career education.

e. Clarify the role of the college/university in career education.

f. Define for the committee such terms as: work, career development, career education, vocational education, community-based system of education.

g. Organize an advisory committee to be composed of elementary, secondary, post-secondary educators and community lay people to: (1) aid in interpreting implications of career education for the college/university teacher preparation programs; and (2) assist with in-service education of the college faculty.

h. Establish in-service education priorities.

i. Consider in-service education strategies. (Two interesting strategies colleges have considered are: (1) designing career education projects in conjunction with a cooperating school as a means of providing impact on both students and faculty; and (2) organizing and training interdisciplinary cadres of college teachers to instruct others on campus and to work with local educational agencies in the state).

j. Organize and coordinate in-service education groups.

k. Secure funds to support in-service education.

Comprehensive Career Education Project, 1975-76.

UNIVERSITY BASED

COMPREHENSIVE CAREER EDUCATION PROJECT

GROUP EXERCISE

"Tasks for Implementing Career Education
Concepts and Techniques
Into The
College Curriculum"

The " how'of infusing career education into pre-service teacher training has become a most important concern for teacher educators faced with decision making and establishing priorities. Several of the most important questions to be dealt with are:

1. What is the role of the college/university in career education?

2. Who should sit on or be invited to participate in the deliberations of a "Career Education Advisory Committee?" and "How should they be selected?"

3. What in-service education priorities should be established?

4. What topics should be included in an in-service education program for faculty? Sample topics are:
   a. The rationale for Career Education
   b. Identifying models for the collegiate level which will prepare personnel for career education implementation for all students.

5. What specific commitments are the colleges/universities willing to make to prepare career education personnel?

6. What career development process or procedure is currently in effect for students on this campus? How effective is it? What staff members or departments are involved? What support services are available on this campus?

SPECIFIC TASKS:

1. Identify specific Career Education Tasks for your campus.

2. Develop a conceptual framework and organizational plan for implementing career education through pre-service program content, varied learning experiences, and career development services.

3. Identify specific curriculum areas that could be affected within your area of specialty - courses, graduate programs, and services.

4. Identify concerns, needs, or variables that you need addressed in our remaining sessions.

Teacher	Report to	Place	Time	Type Dress
Nancy Mockler	Bill Shook	City Hospital - Health Dept.	8:00 a.m.	optional
Beth Supranovich	Bill Shook	City Hospital - Health Dept.	8:00 a.m.	optional
Cathy D'Errico	Bill Shook	City Hospital - Health Dept.	8:00 a.m.	optional
Pat Sirois	Mel Maidlow	City Hall - Assessors Office	8:00 a.m.	optional
Annette Roberts	Capt. Scripture	Police Department	7:25 a.m.	optional
Jerry Lynch	Capt. Scripture	Police Department	7:25 a.m.	optional
Frank Gardiner	Capt. Scripture	Police Department	7:25 a.m.	optional
Gary Gallant	Capt. Scripture	Police Department	7:25 a.m.	optional
Ann Marie Corson	Capt. Scripture	Police Department	7:25 a.m.	optional
Lila Richmond	Capt. Scripture	Police Dept. - Dispatcher	7:25 a.m.	optional
Irvin Krupke	John Frawley or Walter Luro	City Hall - Engineering Dept.	8:00 a.m.	optional
Anne Brann	Ken Dumas	City Hall - Data Processing	8:00 a.m.	optional
Betty Cary	Ken Dumas	City Hall - Data Processing	8:00 a.m.	optional
Charles Tracy	Basil Eaton	City Hall - Inspection	8:00 a.m.	optional
Jerry Ballanger	Basil Eaton	City Hall - Inspection	8:00 a.m.	optional
Al Winslow	Basil Eaton	City Hall - Inspection	8:00 a.m.	optional
Harry Schoenberg	Ralph Mishou	Treatment Plant	8:00 a.m.	work

Teacher	Report to	Place	Time	Type Dress
Cindy Sturgeon	Dave Leathers	Airport Terminal Building (2nd floor)	8:00 a.m.	optional
Richard Woodsum	Bob McKechnie	Motor Pool	8:00 a.m.	work
Marylu Lane	Roy Donnelly	City Hall - Purchasing Office	8:00 a.m.	optional
Peggy Larrabee	Roy Donnelly	City Hall - Purchasing Office	8:00 a.m.	optional
Barbara Parker	Hank Trahan	Public Works - Forester	8:00 a.m.	work
Linda Rooks	Hank Trahan	Public Works - Mason/Foreman	8:00 a.m.	work
Paula Tingley	Hank Trahan	Public Works - Laborer	8:00 a.m.	work
Laura Weissman	Hank Trahan	Public Works - Carpenter	8:00 a.m.	work
Jo McAlary	Phil Gould	Auditorium - Maint. Supervisor	8:00 a.m.	work
Wayne Willette	Ed Brown	City Hall	8:00 a.m.	optional
Gloria Smith	Ed Brown	City Hall - Welfare	8:00 a.m.	optional
Michelle Pulley	Ed Brown	City Hall - Welfare	8:00 a.m.	optional
Dorothy McMahan	Ed Brown	City Hall - Welfare	8:00 a.m.	optional
Beth Boynton	Ed Brown	City Hall - Welfare	8:00 a.m.	optional
Claire Porter	Chief Jellison	Fire Department	8:00 a.m.	work
Virginia Booth	Chief Jellison	Fire Department/Mechanic	8:00 a.m.	work
Carol Parks	Bill Shook	Hospital - R.N.	8:00 a.m.	optional
Linda Piper	Bill Shook	Hospital - Health Dept.	8:00 a.m.	optional

INFUSION MATERIALS

Elements and Outcomes

Career Education Activities
Development Format

Sample Activity

Questionnaire for Retired Resource Personnel

Summary of Career Education Activities
Conducted by Project Teachers
(Jan. - May)

ELEMENTS & OUTCOMES OF CAREER EDUCATION

Element I	Outcome
Self Awareness	Self Identity

K---------12

The student will become aware of himself, his needs, strengths, and personal likes and dislikes so that he may develop self knowledge and a positive self identity which will aid him to make effective life career decisions.

Element II	Outcome
Educational Awareness	Educational Identity

K---------12

The student will recognize:

a. the significance of basic skill development and the mastery of content knowledge as a means of achieving career goals.

b. that different career directions require varying types of educational preparation.

c. that education is continuous, occurring in and outside of school.

Element III	Outcome
Career Awareness	Career Identity

K---------12

The student will recognize that his career development includes progression through stages of educational and occupational experiences, will understand the variety of occupations found in the world of work and the relationship between career and life-style.

Element IV	Outcome
Economic Awareness	Economic Understanding

K---------12

The student will understand:

a. the way in which occupations relate to needs and functions of society.

b. the relationship between personal economics, life-styles and occupational roles.

c. the range of social and economic benefits associated with various occupations.

d. basic economic concepts so that he may utilize them to best meet his life career goals.

Element V	Outcome
Decision-Making	Career Decisions

K------12

The student will understand that decision-making includes responsible action in identifying alternatives, selecting the alternative most consistant with his goals, and taking steps to implement the course of action. He will become proficient in using resource information to make career decisions.

Element VI	Outcome
Beginning Competencies	Employment Skills

K--------12

The student will develop basic cognitive skills plus the skills required to identify the objectives of a task, specify resources required, outline procedures, perform operations, and evaluate the product so that he may be effective in the work world.

Element VII	Outcome
Employability Skills	Career Placement

K------12

The student will develop abilities required to find, secure, and maintain employment. He will develop work habits and attitudes necessary to enter an occupation in the career area of his choice.

Element VIII	Outcome
Appreciations & Attitudes	Self-Social Placements

K------12

The student will recognize the responsibility to himself and others when accepting a task or job. The student will recognize individual differences and become tolerant in his interpersonal relationships. By doing

so, the student will best know how to place himself in working and social situations.

At every grade level, specific goals for each element are set so that each student experiences a sequential developmental process whereby he develops profiency in the eight elements.

CAREER EDUCATION ACTIVITIES DEVELOPMENT FORMAT

The following format is to be used in developing career education activities.

Goal	-	A global statement of direction, intent or long range aim
Objective	-	A statement of instruction that is intended to produce observable or measurable student performance
Learning Activities	-	Specific classroom or community based activities that facilitate attainment of the objectives
Support Resources	-	Curriculum materials, kits, games, resource people, field trips, etc.
Evaluation	-	Specific techniques to assess learner achievement and/or program effectiveness

NAME Bob Cratchet

SCHOOL Scrooge Academy

GRADE LEVEL
OR SUBJECT 4-6

CAREER EDUCATION
ELEMENTS INVOLVED Decision-making, Self Awareness
Career Awareness, Educational Awareness

GOAL: The student will develop the understanding that career development requires a continuous and sequential series of choices.

OBJECTIVES	LEARNING ACTIVITIES	RESOURCES	EVALUATION
The student will . . .	TOPIC: Careers develop from a sequence of choices. Social Study/Language Arts		
1. be aware that career development is a life-long process which unfolds from the interplay of their past experiences and decisions.	1. Construct a sequential "ladder" in a job with responsibilities and training required, i.e. plumber a. apprentice b. member of a crew c. foreman of a crew d. own his own business 2. What are some jobs that were learned "on the job" and now require educational preparation?	Encyclopedia of Careers and Vocational Guidance Vol. I, II Splaver-Vocational Guidance Books (for 10-14 year olds) Guidance Counselors School Principals Book: Wilia - Occupational Information in the Elementary School Career Opportunities (New York Life Insurance)	1. Since work areas have correlated jobs within them, have the pupil evaluate what this means to him relative to job choice and time for making that choice.

OBJECTIVES	LEARNING ACTIVITIES	RESOURCES	EVALUATION
The student will		Books: Wells - <u>What Does An Astronaut Do?</u>	
2. be aware that individuals must consider many variables as they develop their career goals.	1. Show choices and decisions they'll have to make at Junior and Senior High. Interview guidance personnel and school principals.		1. List his choice of electives he plans to take at Jr. High and Sr. High and tell why in relation to his choice.
	2. Interview several different types of workers to discover the training needed: a. high school diploma b. on the job training c. college degree required d. special college required e. technical college f. no training required		2. Written paragraph on-What specialization in the world means to him for future planning.

The Career Education Advisory Committee is studying various ways of enriching the educational program of the Bangor schools. One way to widen the students' educational opportunities, particularly in learning work skills, is to use the retired resources of the community. The purpose of this questionnaire is to find out what interests and talents the retired people of Bangor would be willing to share with their young people. Once this information is on file, it will be possible to match an individuals's special skill with a student's particular interest. Would you be willing to volunteer your time and have this questionnaire kept on file at the Harlow Street School so that in the event of a particular need or interest, you might be contacted?

YES NO (Circle one)

NAME_____

ADDRESS_____PHONE_____

Field of interest (cite occupation or industry, public service, arts and crafts, science, public service, business, trade union):

_____

_____

Special Skills:_____

What size group would you like to work with?

_____(large: 20 plus) _____(medium: 5-20)

_____(small: 2-5) _____(individual: one to one)

How much time would you be willing to give?

_____Once a week _____Number of hours

_____Hands-on type training (every day for several weeks)

_____Occasional (lecture or demonstration for a specific topic)

_____Other

I understand that this information is merely exploratory and does not bind me in any way. If there is a need for or interest in my services, I shall be contacted and further arrangements will be made.

Signed_____

Please return completed questionnaire to the person who gave it to you -- or to Mrs. Nona Thompson, Career Education Consultant, 183 Harlow Street School, Bangor, Maine 04401.

Summary of Career Education Activities Conducted
By Project Teachers
(Jan. - May)

Career Education Element		Grade Level K-6	7-9	10-12
Self-Awareness	Number of Activities	49	35	59
	Number of Students	177	283	226
Career Awareness	Number of Activities	54	49	11
	Number of Students	224	371	232
Educational Awareness	Number of Activities	57	11	44
	Number of Students	163	143	247
Economic Awareness	Number of Activities	25	15	11
	Number of Students	165	174	213
Beginning Competencies	Number of Activities		13	7
	Number of Students		140	63
Employability Skills	Number of Activities	5	2	34
	Number of Students	22	17	249
Appreciations & Attitudes	Number of Activities	47	19	33
	Number of Students	193	330	139
Decision Making	Number of Activities	12	7	2
	Number of Students	139	114	31

NUMBER OF TEACHERS: K-6 - 14
7-9 - 11
10-12 - 6

ACTIVITY = one classroom period. In the Bangor School System these periods range from 20 minutes to 40 minutes in length.

EVALUATION MATERIALS

Project Tests List

Bangor Teacher Evaluation Form

Teacher Educator Evaluation Form

Recertification Credit Form

Teacher Suggestions For 1976-77

Career Education Knowledge Inventory

Material Evaluation Form

Teacher Education Training Seminar
Participant Reactions

Summary of Final Evaluations
of In-Service Workshops
By Bangor Teachers

Summary of Evaluations of
Individual In-Service Workshops

COMPREHENSIVE CAREER EDUCATION PROJECT

The following tests were used in measuring both teacher and student learner outcomes in this project:

NAME	PUBLISHER	GRADE LEVEL
Career Education Knowledge Inventory	Center for Vocational-Technical Education, Ohio State University	Adult
Attitude Inventory	Unknown	Adult
Self-Concept and Achievement Motivation Inventory (SCAMIN)	N.J. Milchus, et al Person-O-Metrics, Inc. 20504 Williamsburg Rd. Dearborn Hts., Michigan 48121	K-3
Survey of School Attitudes	T. Hogan, Harcourt, Brace and Jovanovich, Inc., New York	1-6
Career Knowledge	Barbara Fulton, Evaluative Research Associates, 5431 Trailbend Road St. Louis, Mo. 63033	1-3
Self Esteem Inventory	S. Coopersmith W.H. Freeman & Co. San Francisco, Ca., 1967	2-12
Career Maturity Inventory, Attitude Scale	J.M. Crites, McGraw-Hill/ California Test Bureau	4-12
Occupational Knowledge Test (Form A)	R.W. Heath Comprehensive Evaluation Project U.S.O.E. Contract No. EC-9-099017-4424 (0[illegible])	4-6
Knowledge of Occupational Areas Test (Form B)	Center for Occupational Education, North Carolina State University of Raleigh, 1973	4-6

NAME	PUBLISHER	GRADE LEVEL
Career Development Inventory	D. Super, et al Teachers College, Columbia University, New York, N.Y.	7-12
Career Avareness Survey	R. Drummond and C.W. Ryan, College of Education, University of Maine Orono, Maine	4-12

APPENDIX M

CAREER EDUCATION TRAINING SEMINARS

BANGOR PUBLIC SCHOOLS

EVALUATION

In order to determine the value of this session and provide useful workshops in the future, completion of the following items will assist in the planning process. Your responses will be tabulated and copies provided for each participant.

1. GRADE LEVEL (Check one.)

K-3 _____

4-6 _____

7-9 _____

10-12 _____

Other _____
(Specify)

2. SUBJECT AREA: (Secondary Teachers (7-12) Only) (Check one.)

Commercial/Business _____

English/Reading _____

Foreign Language _____

Guidance _____

Industrial Arts _____

Math _____

Special Ed/Special Programs _____

Social Studies _____

3. WORKSHOP SCHEDULE (check one.)

Self Awareness (October 22) _____

Career Awareness (Nov. 5) _____

Career Awareness (Dec. 3) _____

Appreciations & Attitudes (December 17) _____

Educational Awareness (Jan. 21) _____

Economic Awareness (Feb. 4) _____

Beginning Competencies and Employability Skills (Feb. 25) _____

Community Involvement (Mar. 10) _____

4. WORKSHOP FORMAT: Indicate degree to which you agree or disagree with each statement:

SA - strongly agree
A - agree
U - undecided
D - disagree
SD - strongly disagree

	SA	A	U	D	SD
a. As a result of today's presentation, I have a better understanding of the meaning of this element.					
b. I have received some practical suggestions about how I can implement this element in my classroom.					
c. I plan to try an activity related to this element in my class sometime during the next two weeks.					
d. Adequate time was allowed for discussion purposes. (If disagree, circle one of the following: too much / too little).					
e. The workshop personnel created an atmosphere in which I felt free and comfortable to ask any questions that I had.					

Please check your response to the following items:

F. Did the content of this workshop generally hold your interest?

_____ Highly interesting _____ Slightly Boring

_____ Somewhat interesting _____ Continuously Bored

Comments:

G. This workshop:

_____ Assumed too much knowledge

_____ Assumed too little knowledge

_____ Seemed at the appropriate level of sophistication

_____ Assumed more knowledge than I had, but I was not lost by presentation of materials.

Comments:

H. How effective were the project staff members in relation to their topic?

_____ Very effective _____ Somewhat effective

_____ Effective _____ Weak

Comments:

I. How effective were the South Portland staff members in relation to their topic?

_____ Very effective _____ Somewhat effective

_____ Effective _____ Weak

Comments:

ADDITIONAL COMMENTS:

1. The most helpful part of today's presentation was:

2. The workshop could have been improved by:

3. In future sessions I would like to see:

4. What assistance, if any, will you need to implement this element into your curriculum? (e.g. consultant services, technical assistance, curriculum materials, etc.)

COMPREHENSIVE CAREER EDUCATION PROJECT

TEACHER EDUCATION SEMINAR EVALUATION

The following questions have been prepared in order that you might provide us with an evaluation of each of the three Career Education Training Seminars. Your assistance with this will be of considerable value, both in this evaluation and in planning future seminars.

* * * * * * * *

Please provide answers to the following:

Have you previously received formal training in Career Education?

Yes_____ No_____ If Yes, what type?_____
(Courses, Seminars, etc.)

Are you presently involved in Career Education on a regular basis?

Yes_____ No_____ If Yes, in what capacity?_____

At which of the following locations did you attend the Comprehensive Career Education Training Seminars?

_____University of Maine - Portland-Gorham

_____University of Maine - Presque Isle

_____University of Maine - Orono

INSTRUCTIONS: Please evaluate each of the items by assigning one of the following rankings to it:

1 = POOR 2 = AVERAGE 3 = GOOD 4 = EXCELLENT

FIRST SESSION:

1. Did this session provide sufficient information concerning Career Education? ____

2. Was the content sufficient in order to provide you with a definition of Career Education? ____

3. Did this session present an adequate rationale for Career Education? ____

4. Kenneth B. Hoyt's paper, "An Introduction to Career Education," provided additional material for the development of:

   a philosophic basis for Career Education ____

   a definition of Career Education ____

   a rationale for Career Education

5. Did this session allow sufficient time for discussion and questions? ____

6. Were the methods of presentation appropriate for the topics involved? ____

7. Was the first session long enough to cover the various topics? ____

8. Please evaluate the depth of the content of this session (in terms of your previous knowledge of Career Education.) ____

9. Generally, were the printed handouts of value to you? ____

10. Please list any topics which you feel should have been considered in this first session which were not covered.

    _____

    _____

    _____

11. Have you any suggestions concerning format or methods of presentation which might be incorporated into future sessions concerning topics contained in this first session?

    _____

    _____

    _____

SECOND SESSION:

1. Please evaluate the presentations which were given in each of the following areas, in terms of CONTENT and PRESENTATION:

	CONTENT	PRESENTATION
Career Education in the Elementary School	_____	_____
Career Education: The Secondary School	_____	_____
Career Education: The University	_____	_____

2. How would you evaluate this session vis-a-vis your previous knowledge concerning Career Education? _____

3. Did the structure of this session allow sufficient time for questions and discussions? _____

4. Were there topics which you feel should have been included in this session? If so, would you please list them.

_____

_____

_____

5. Have you other suggestions which would have increased the value of the second session?

_____

_____

_____

THIRD SESSION:

1. Please evaluate both the CONTENT and the PRESENTATION of each of the presentations in this session.

	CONTENT	PRESENTATION
Expanding Alternatives for Teacher Education Students	_____	_____
Strategies for Implementing Career Education	_____	_____

2. In terms of your knowledge of Career Education, how would you rank the information contained in this session? _____

3. Please evaluate the amount of time provided during this session for discussion and questions. _____

4. Were there other topics or subjects which might have been included in this session?

_____

_____

_____

5. Have you other suggestions which might have been implemented in order to increase the value of this third session?

_____

_____

_____

OVERALL:

1. What do you feel was (were) the weakest aspect(s) of these seminars?

_____

_____

_____

2. What do you feel was (were) the strongest aspect(s) of these seminars?

_____

_____

_____

3. Please identify the most relevant topic of these seminars in terms of your interest and knowledge of Career Education.

_____

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS FORM.
PLEASE DO NOT SIGN.

Charles W. Ryan

Bangor Public School Career Education
In-Service Program, 1975 - 76

Final Evaluation by Participants
Applying for Recertification Credit

1. Consider this course as a whole and rate it using the following scale: (circle one)

   5 Excellent
   4 Good
   3 Fair
   2 Unsatisfactory
   1 Let's not have another one like this

2. Activities which were the most beneficial. Rank order (#1 is considered most beneficial)

   _____ Background lectures

   _____ Activities associated with lecturer (magic circle, Work Values Inventory, group leadership, etc.)

   _____ South Portland demonstrations

   _____ Community people panels

   _____ Field trips

   _____ Job shadowing

   _____ Independent study time

   _____ Other (please specify)

3. Did the course meet your needs?

   _____ Yes

   _____ No

   _____ Partly

4. Skills you have developed through this in-service program.

   _____

   _____

   _____

   _____

5. How did you feel about career education prior to this program?

6. How do you feel about career education after completing the program?

7. Your future plans regarding career education for next year.

8. Any suggestions you would like to make for a similar type of workshop program next year.

9. Additional Comments:

COMPREHENSIVE CAREER EDUCATION PROJECT
BANGOR PUBLIC SCHOOLS
TEACHER SUGGESTIONS FOR 1976-77

Compiled Results of Small Group Work

April 28

Topics and Group Comments

A. Ideas you would like to see implemented next year:

1. card file (resource file of field trips, speakers, businesses)
2. centralized resource center, especially in the high school
3. career ed. people from this year man resource rooms (jr.-sr. highs) instead of study halls
4. funding for field trips (clarify sources of funding)
5. career ed. coordinator is necessary to tie things together and organize and keep channels of communication accurate and open
6. panels next year (business)
7. job shadowing
8. more time to plan activities
9. build your own resource guides
10. teach fractions by using stock market
11. teach measuring by cooking/bicentennial
12. resource center - have materials available for all teachers - send out a flier or announcement with materials/AV to make classes more relevant
13. umbrella policy for field trips - parents taking kids on trips
14. allow children to raise money for projects
15. at high school level, leway to establish a resource center based on the So. Portland format
16. parents night in each school for career ed. slide presentation to gain parental support and direct involvement
17. specific individual results of pre and posttests would help teachers plan for future implementation
18. Involve parents - go get them - ask them to talk to class

B. Concerns about career education implementation:

1. continuity is a concern
2. lack of time to involve others
3. continuity problems - organization of curriculum so there is some pattern of development, K-12 - worried about some kids missing career ed. completely
4. have at least one teacher at each level in each school with career ed. background
5. a ten-mile limit on field trips is restrictive
6. philosophy be kept in perspective - much opportunity to get involved so that basics do not become secondary. Career education should be used as a vehicle. Must be aware of student hours involved in projects
7. eight elements-should consideration be given to the particular elements that each teacher would be involved with?

8. should be a concern for the work ethic - it is honest work
9. what's happening to infuse career ed. in new social studies curriculum K-6
10. concern about next workshop time
11. in-service day
12. several people are worried (apprahensive) at the timing of a system-wide career ed. presentation on one of the end-of-the-year workshop days. Many teachers have evidenced hostility toward these workshop days, and we would hate to have them "turn off" our program because of timing.
13. problem with term "Career Education" - turns off some people who consider it to be vocational training, fringes, extras, etc.

C. Recommendations for next year's workshop program:

1. meet in summer for a couple of weeks full time and receive $compensation (what might be paid to substitute if class time is used) or perhaps just for recertification
2. use of school time is a problem. However, using after-school time would be difficult. Must make it worthwhile enough to give recertification credit. We've worked hard and it has taken full days for us to digest much of this information. The format for next year must be seriously thought out. Use all in-service days for career ed. instead of unplanned "sweater patting".
3. seems to be much hostility towards career ed. at high school. Does principal expect involvement in career ed. next year?
4. with the eight elements - a little more understanding and an overview
5. coordination to avoid overkill - teachers must work together
6. at all levels - resource rooms and materials (allow Don Gould to be a central source for filmstrips and AV materials. Must be controlled-administration of depository)
7. community involvement is essential
8. release time for a teacher per building per month ½ or 1 whole day to set up a monthly program for career ed.
9. booklet of ideas and activities to do to infuse and/or use career ed.
10. separate catalog - card file for career ed; keep up to date
11. release time for this years trainees to coordinate, organize, share so that we can retain cohesiveness and better implement
12. afternoon activities open to <u>all</u> teachers to attend - such as panel discussions with members of community, or whatever. With this we could all maintain contact with career ed. ideas

D. Additional Comments:

1. getting to know each other and who to contact in your own grade or area for ideas they've mentioned or activities they've used
2. finally, we are dispelling the myth that you are a nobody unless you go to college
3. brought business a little closer to the school
4. tours and speakers were a good idea - enjoyable and learning experience

5. need info on Career Guidance Institute
6. Selling career ed. in June is definitely not a good idea. Selling anything other than a Tom Collins and a lounge chair is not a good idea in June. Slide show in each building would be great. Do not corral us all at Bangor High School. Small groups - NO!!

COMPREHENSIVE CAREER EDUCATION PROJECT

PARTICIPANTS' POST-TEST

KNOWLEDGE INVENTORY

PREPARED BY COMPREHENSIVE CAREER EDUCATION PROJECT STAFF FOR
ASSESSMENT OF IN-SERVICE TRAINING COMPONENT, APRIL, 1976

Directions: Please read each question and its numbered answers. When you have decided which answer is correct, blacken the corresponding space on the IBM answer sheet with a Number 2 pencil. If you change your mind, erase your first mark completely.

1. During the years of a child's education from pre-school through sixth grade, the main emphasis concerning career development is placed on:
   1. career exploration
   2. career awareness
   3. career preparation
   4. all of the above

2. At seventh to ninth grade level, emphasis is on:
   1. career exploration
   2. career awareness
   3. career preparation
   4. all of the above

3. At the tenth through twelfth grade levels, emphasis is on:
   1. career exploration
   2. career awareness
   3. career preparation
   4. all of the above

4. The basic career education element which helps students perceive processes in production, distribution, and consumption is:
   1. self awareness
   2. economic awareness
   3. educational awareness
   4. career awareness

5. The career education element which introduces and develops skills by which man extends his behaviors is the one entitled:
   1. employability skills
   2. decision-making skills
   3. self-awareness
   4. beginning competencies

6. Perceiving life roles and the feeling toward self and others in society and economics is a process involved in the career education element entitled:
   1. attitudes and appreciations
   2. self-awareness
   3. employability skills
   4. beginning competencies

7. Activities for the elementary school student based on the findings of pedagogists such as Piaget, and leading to a greater understanding by that student of his own uniqueness fall under the career education element of:
   1. attitudes and appreciations
   2. beginning competencies
   3. self awareness
   4. decision making

8. The eight essential elements and outcomes of career education are illustrated in the:
   1. matrix
   2. components
   3. elements
   4. taxonomies

9. The following is an example of a good performance objective:
   1. The nursing aide student will understand the anatomy of the human body.
   2. The nursing aide student will name and describe the four basic patient positions.
   3. The student will know that there are four basic patient positions.
   4. The student will learn how to make a post-operative bed.

10. According to the career education matrix, the outcome sought from the element "Employability Skills" is:
    1. employment skills
    2. career placement
    3. educational identity
    4. career identity

11. Self social fulfillment or an active and satisfying work role is the outcome sought from the career education element called:
    1. appreciations and attitudes
    2. decision making
    3. economic awareness
    4. educational awareness

12. Which of the following is <u>not</u> a functional definition of career education:
    1. a program infused into the existing curriculum
    2. a program of discrete career education curriculum blocks
    3. a cooperative educational venture involving school, home, and community
    4. a comprehensive educational program which focuses on careers

13. The following offers a strong argument <u>for</u> career education:
    1. academic standards are affected by such a program
    2. schools and politics don't mix
    3. vocational education is a low status curriculum
    4. many of today's students feel unneeded by our technological society

14. One of the tenets of career education is that the program be comprehensive for:
    1. K - 12
    2. 1 - 6
    3. K - Adult
    4. K - 6

15. A comprehensive career education program supports the student through career awareness, exploration, preparation and:
    1. placement
    2. satisfaction
    3. contact
    4. skills

16. The personality theory of career development states that a person naturally moves toward occupations which:
    1. satisfy his needs
    2. his parents approve of
    3. he is most often exposed to
    4. he unconsciously likes

17. To obtain information concerning a specific standardized instrument to use in an elementary classroom, a teacher should consult:
    1. the in-service coordinator for the school district
    2. his/her immediate supervisor
    3. Buros' Mental Measurements Yearbook
    4. Kuder's Preference Record

18. According to Labenne and Greene, the self concept is built during the growing up process by experience with significant others and by accumulated:
    1. chronological age
    2. social contacts
    3. academic experience
    4. academic credits

19. A child whose self concept portrays him as an intelligent being will tackle academic tasks:
    1. readily
    2. sometimes
    3. hesitantly
    4. never

20. The American psychologist who theorizes a strong correlation between self concept theory and vocational choice is:
    1. A.W. Combs
    2. Glenn Maynard
    3. Donald Super
    4. C.R. Rogers

21. The career development approach which theorizes a heavy reliance on the psychology of individual differences is:
    1. the trait and factor theory
    2. the personality theory
    3. the developmental model
    4. the sociological model

22. The career development theory which strongly takes into account the occupation of the student's father, his financial aid, and influential contacts is:
    1. the trait and factor theory
    2. the personality theory
    3. the developmental model
    4. the sociological model

23. Two of the most popular proponents of the development model of career development theory are:
    1. Holland and Roe
    2. Roe and Maslow
    3. Super and Roe
    4. Super and Havighurst

24. The following people would be valuable members of an advisory group to a career education program:
    1. community service group officers
    2. trade union leaders
    3. management executives
    4. all of the above

25. Snygg and Combs also theorize that the quality of perceptions available to an individual determine that individual's:
    1. intelligence
    2. vocational choice
    3. behavior
    4. all of the above

26. Kelly theorizes that reality is:
    1. indicated by a person's experience
    2. what one perceives it to be
    3. dependent upon a persons's intelligence
    4. dependent upon one's environment

27. Rogers' theory implies that behavior is influenced only when information about one's self and environment is:
    1. apparent on a self-rating scale
    2. studied longitudinally
    3. held in the subconscious
    4. admissible to awareness

28. The self concept development program which is designed for teachers and uses classroom meetings is:
    1. DUSO
    2. Glasserian
    3. Self-Enhancing Education
    4. Dimensions of Personality

29. The SRA program designed to help the child understand himself, others and his environment is:
    1. Focus on Self Development
    2. Dimensions of Personality
    3. Self-Enhancing Education
    4. Making It Strange

30. The career interest test that requires written self analysis is:
    1. Work Values Inventory
    2. Self Directed Search
    3. Focus on Self Development
    4. Kuder Preference Record

31. The program which presents a systematic approach to sound mental health concepts for 4th to 6th graders is:
    1. Focus on Self Development
    2. Dimensions of Personality
    3. Career Maturity Inventory
    4. Making It Strange

32. The technique which emphasizes children working with "significant" adults in problem-solving and value clarification is:
    1. case study
    2. classroom meetings
    3. interest testing
    4. DUSO

33. A program of creative writing based on the conscious use of metaphor is:
    1. Making It Strange
    2. Glasserian
    3. Self-Enhancing Education
    4. DUSO

34. Which of the following is <u>not</u> a method or technique of child study:
    1. projective technique
    2. standardized tests
    3. case history
    4. play therapy

35. The following is not a child factor which is considered in individual differences:
    1. home and family background
    2. grade level in school
    3. physical development
    4. intellectual development

36. A technique of child study which reveals how a child would like to relate to others and how they feel about him is:
    1. sociometric test and evaluation
    2. autobiography
    3. social distance scale
    4. self concept instrument

37. The child study technique which asks a child to give his reaction to other class members within the framework of certain specific questions is:
    1. self concept instrument
    2. social distance scale
    3. anectodal record
    4. autobiography

38. An activity constructed by a teacher or counselor to determine a student's <u>developmental history</u> is a(n):
    1. autobiography
    2. achievement test
    3. interest inventory
    4. aptitude test

39. Which of the following is <u>not</u> included in the rationale for using the instructional unit approach to career education:
    1. Career education must be reflected in the curriculum at all grade levels.
    2. Career education should be infused into all discipline areas.
    3. Career education units should follow the same approach that students are accustomed to.
    4. Career education must involve the instructional staff since they are closest to the students.

40. Curriculum units containing primarily career development goals and supportive contents:
    1. can be used independently of a subject area
    2. can be used with any discipline area preferred
    3. are called career development units
    4. all of the above

41. A reference source which analyzes the proporcion of jobs available is the:
    1. Occupational Outlook Handbook
    2. The Work Experience Kit
    3. Dictionary of Occupational Titles
    4. Any CCEM instructional unit

42. The product published by Science Research Associates and designed to make one aware of additional materials to support career education is:
    1. Occupational Outlook Handbook
    2. The Work Experience Kit
    3. Dictionary of Occupational Titles
    4. Any CCEM instructional unit

43. The following people would be valuable members of an advisory group to a career education program:
    1. community service group officers
    2. trade union leaders
    3. management executives
    4. all of the above

44. A short orientation program for community resource volunteers will probably:
    1. not be feasible in most cases
    2. be most effective and desired
    3. result in unwilling volunteers
    4. not be approved by school administrations

45. The following is a role that can be assumed by a volunteer in a career education program:
    1. counselor assistant
    2. career cluster aide
    3. field trip coordinator
    4. all of the above

46. The following is <u>not</u> included in a rationale for using resource people:
    1. a free resource
    2. career variety
    3. realism in the classroom
    4. unique experiences

47. The following is <u>not</u> one of the purposes for obtaining aid from resource people:
    1. ease teacher time and work load
    2. arouse student interest
    3. allow awareness of differing viewpoints
    4. arouse student curiosity

48. The following is (are) valid reason(s) for planning a field trip:
    1. to correct misconceptions
    2. to allow students a chance to see the "outside world"
    3. to make learning more interesting and meaningful
    4. all of the above

49. One of the most important steps for the teacher to take in preparing for a field trip is to:
    1. explain completely and in great detail what the students will see
    2. stress the urgent need for this trip to parents
    3. develop a background for the students in the form of films and other reference materials
    4. all of the above

50. A systematic means of recording procedures and information from field trips is not:
    1. reliance on one's memory
    2. card catalogues
    3. notebooks
    4. audio tape recorder

51. It would be logical to assume that children could role play a factory assembly line:
    1. if they had never seen one
    2. if they heard a story about one
    3. after a field trip to an automobile factory
    4. after a study trip to a bakery

52. In arranging and conducting a classroom interview, it is a good idea to:
    1. make special arrangements prior to the guest's arrival
    2. design questions to be used in cooperation with the students
    3. ask the guest each question developed
    4. all of the above

53. A good post-interview procedure is to:
    1. follow up the interview topics with a related experience
    2. report to the principal on the outcome of the interview
    3. punish any students who may have disrupted the session
    4. none of the above

54. The technique of role playing requires:
    1. actual experience with the topics being studied
    2. acting and directing talent on the part of the teacher
    3. objectives with situations that can best be learned by having students act them out
    4. a stage and props

55. It is a good idea to reenact the roles if:
    1. the students want to because it was amusing
    2. additional insights are needed
    3. the students don't want to, but the teacher does
    4. if it prompts aggressive behavior by a usually shy student

56. Part of the goal of making career education a program for all students is to make them aware of the projected:
    1. unemployment rate for the next 10 years.
    2. career potential in their city
    3. local occupational needs
    4. occupational needs of the nation

57. One role of the teacher in helping the student develop career decision skills is to help bridge the gap between:
    1. school and job
    2. school and home
    3. job skills and job
    4. all of the above

58. Which of the following is not an advantage of career education for minorities according to the Office of Education:
    1. students are educated for specific types of work
    2. students are more aware of occupational choices
    3. adult society will become more equal
    4. curriculum will be more flexible to meet individual needs

59. The following question should not be a problem area in career education for minorities:
    1. How will career education relate to remedial education?
    2. Will students be able to leave high school with salable skills?
    3. What role will schools play in breaking down job discrimination?
    4. How does career education relate to ethnic awareness?

60. Which of the following would not be an essential element of career education at the elementary school level (K-6)?
    1. developing a positive self-concept
    2. developing a sense of community involvement
    3. developing work attitudes and worker discipline
    4. developing employment seeking skills

61. Which of the following societal changes have provided impetus for career education in the last ten years:
    1. family living patterns have changed
    2. education has extended beyond completion of high school
    3. young people have reduced contact with adults or community agencies
    4. all of the above

62. Which of the following would be the first step taken by a school system to implement a program of career education:
    1. inventory and marshal all available resources
    2. begin studying the career education program most appropriate for your community
    3. seek the cooperation of all necessary organizations, institutions, and individuals
    4. develop an understanding of the concepts of career education

Test items 1 thru 59 were selected from materials published by Ohio State University, The Center for Vocational and Technical Education, 1973.

Return to: Career Education Office
Harlow St. School
183 Harlow Street
Bangor, Maine 04401

CAREER EDUCATION MATERIAL REVIEW FORM

Title: Producer:

PURPOSE: What educational purpose(s) would this material serve? (to introduce, to review, to demonstrate, to dramatize, etc.)

COURSE	PURPOSE	EFFECTIVENESS (1+low, 5+high					
1.		1	2	3	4	5	
2.		1	2	3	4	5	
3.		1	2	3	4	5	

Recommended levels are: Primary_____, Intermediate_____, Junior high_____, Senior High_____, Adult_____.

Please Rate the Following:						
1. Sound Track	1	2	3	4	5	
2. Photography	1	2	3	4	5	
3. Your estimate of the overall value of this material	1	2	3	4	5	

Suggested Utilization:	Yes	No	
1. Would you use this material in your classroom?			
2. Do you feel other teachers would use this material?			
3. Do you recommend this material for purchase?			

Comments and General Impressions: (Note here a brief statement of how the material effects you, its special strengths or weaknesses)

Evaluator: Position:

Catalog Number_____, Cost_____, Approved_____

TEACHER EDUCATION TRAINING SEMINAR

PARTICIPANT REACTIONS

Of those professors who attended the Teacher Education Seminars, and completed the Seminar Evaluations, only thirty-one percent had received formal training in Career Education, and only twelve percent were involved in Career Education on a full-time basis.

In general, the evaluations for the first session, on all three campuses ranged from good to excellent, with the Presque Isle seminar participants evidencing a marked degree of enthusiasm in all of the evaluation areas. The first session received an over-all high rating for the content of the sessions as well as the value attributed to the various printed materials provided to supplement the presentations. Of particular note was the usefulness of K.B. Hoyt's "An Introduction to Career Education" as an assist in providing a definition and rationale for Career Education. In all, the three groups responded to the first session by way of stating that there was excellent depth, definition and length vis-a-vis the objectives of the session.

The evaluation of the second session, although highly rated in the three locations, offered a greater range of perceptions than did the first session. The evaluations for the "Career Education in the Elementary School" presentations ranged from good to excellent. However, the evaluation of "Career Education in the University" was disappointingly low, particularly in the area of content. Of the three content areas of evaluation: "Career Education in the Elementary School," "Career Education in the Secondary School," and "Career Education in the University," both the content and mean scores for the presentation "Career Education in the Elementary School" received the most favorable evaluation. Upon comparing the evaluation for the three locations, the Orono campus evaluations were consistently higher in all areas with the general concensus that the over-all quality was excellent. Both the Orono and the Presque Isle groups noted that they would suggest more emphasis upon University Career Education strategies and concepts in future presentations.

The third session was highly rated by the three groups, with both the content and presentation of the topic "Strategies for Implementing Career Education" receiving excellent ratings. Also, the three groups ranked the information from this third session as excellent in terms of their previous knowledge of Career Education. All three groups expressed a desire to spend more time in examining information concerning the topics included in this session.

In summary, the evaluation of the three sessions for the three campuses, indicated an increase in cognitive knowledge about career education and a positive reaction to the concept. The high quality of printed materials was singled out in the three sessions. Suggestions for future seminars included more time for discussions, more information concerning Career Education, and increased emphasis on how to infuse Career Education into the University setting.

SUMMARY OF FINAL EVALUATIONS
OF IN-SERVICE WORKSHOPS
BY BANGOR TEACHERS

Bangor Public School Career Education
In-Service Program, 1975 - 76

Final Evaluation by Participants
Applying for Recertification Credit

1. Consider this course as a whole and rate it using the following scale: (circle one)

   5 Excellent (28)
   4 Good (4)
   3 Fair
   2 Unsatisfactory
   1 Let's not have another one like this

2. Activities which were the most beneficial. Rank order (#1 is considered most beneficial)

FINAL RANKING:
This is the rank order as determined by all participating workshop teachers.

__6__ Background lectures

__2__ Activities associated with lecturer (magic circle, Work Values Inventory, group leadership, etc.)

__1__ South Portland demonstrations

__3__ Community people panels

__4__ Field trips

__5__ Job shadowing

__7__ Independent study time

__x__ Other (please specify)

3. Did the course meet your needs?

__29__ Yes

_____ No

__3__ Partly

4. Skills you have developed through this in-service program.

_____

_____

_____

_____

SUMMARY OF EVALUATIONS OF
INDIVIDUAL IN-SERVICE WORKSHOPS

WORKSHOP FORMAT: Indicate degree to which you agree or disagree with each statement:

SA - strongly agree
A - agree
U - undecided
D - disagree
SD - strongly disagree

	SA	A	U	D	SD
a. As a result of today's presentation, I have a better understanding of the meaning of this element.	108	131	19	4	
b. I have received some practical suggestions about how I can implement this element in my classroom.	74	124	38	6	2
c. I plan to try an activity related to this element in my class sometime during the next two weeks.	64	111	63	3	3
d. Adequate time was allowed for discussion purposes. (If disagree, circle one of the following: too much / too little).	58	131	18	41	6
e. The workshop personnel created an atmosphere in which I felt free and comfortable to ask any questions that I had.	129	127	3	2	1

Please check your response to the following items:

F. Did the content of this workshop generally hold your interest?

175	Highly interesting	17	Slightly Boring
68	Somewhat interesting	1	Continuously Bored

Comments:

G. This workshop:

4	Assumed too much knowledge
11	Assumed too little knowledge
231	Seemed at the appropriate level of sophistication
12	Assumed more knowledge than I had, but I was not lost by presentation of materials.

Comments:

H. How effective were the project staff members in relation to their topic?

148	Very effective	16	Somewhat effective
91	Effective	2	Weak

Comments:

I. How effective were the South Portland staff members in relation to their topic?

142	Very effective	19	Somewhat effective
61	Effective	--	Weak

Comments:

SUMMARIZED COMMENTS FROM THE FINAL WORKSHOP EVALUATION:

1. As a result of the career education project the workshop participants indicated development of beginning competencies in the following areas and/or skills:

   a. an awareness and understanding of the elements of career education

   b. an awareness and understanding of the techniques of interviewing, field trips, job shadowing, values clarification and use of community resources

   c. an awareness and understanding of the concept of curriculum infusion.

2. Concerning the participants' knowledge and feelings concerning career education prior to the project, most teachers had unformed and varied views. Some of the commonly mentioned teacher comments were as follows:

   a. We felt career education was for the upper grades only.

   b. We did not understand the principles of career education.

   c. We did not know how to approach it in our classrooms.

   d. We had career education confused with vocational education.

   e. More emphasis should be placed upon career education but we did not know how to go about it in the classroom.

3. As a result of the project, all teachers expressed a positive feeling toward career education. All indicated a desire to see career education continue as an on-going project in Bangor. All felt they had gained competencies in career education. All expressed a desire to see career education infused into the curriculum of the Bangor Schools.

4. Concerning the participants' future plans for career education, the following were mentioned:

   a. All participants expressed a desire to infuse career education elements and activities into their particular courses next year.

   b. Most participants indicated that they would make more and better use of community resource people, parents, field trips and job shadowing.

c. Most participants expressed a desire to see the establishment of a central career education resource center or individual school resource center or both.

d. Many participants expressed a desire to see career education elements infused into the guidance program as well as the curriculum.

e. Several participants expressed a desire to pursue additional training in career education courses at the university and at career education workshops if they are available.

5. The participants suggested the following with regard to a workshop program for next year:

a. All suggested the training of a new group of teachers.

b. Many suggested a more intensive training for this year's group of teachers.

c. Use this year's group of teachers as resource people and workshop staff members next year.

d. Make continued and additional use of the community regarding panels with local business people, job shadowing, field trips.

e. The possibility of a career guidance institute made up of teachers from this year's group.

SUMMARIZED COMMENTS FROM THE INDIVIDUAL WORKSHOP EVALUATIONS:

1. The participating teachers stressed that a most important part of the workshops was the presentation of specific, practical career education ideas, materials and activities by the staff members and the participants from South Portland School Department. They were impressed by the presentations and the small group discussion that stressed specific hands-on activities.

2. The participating teachers were very impressed with the sessions dealing with community contact. Panel discussions involving local business people, job shadowing experiences and local educational and business field trips were well received by the workshop teachers.

3. Concerning future workshops sessions and suggestions for improvement, the participating teachers suggested the following:

   a. Additional discussion and development of career education techniques, ideas, materials and activities K-12.

   b. Demonstrations and visitations at on-going career education projects outside of the Bangor School system.

   c. Additional contact with the local business community regarding panel discussions, job shadowing and field trips.

   d. The possibility of a career education resource center and the continued availability of a career education consultant and coordinator. Teacher comments in this area stressed the need for a centrally controlled resource center where help and career education resources would be available to all teachers.

   e. Most participating teachers indicated that as a result of the workshops, they would plan and implement career education activities into their individual courses.

PUBLIC RELATIONS

Project Announcement

Sample Press Release

Project Staff

Dr. Charles W. Ryan, Project Director
Area Code 207-581-7463
Professor of Education
University of Maine, Orono, Maine

Dr. James R. Miller, Assistant Project Director
Associate Professor of Education
University of Maine, Orono, Maine

Dr. Robert Drummond
Professor of Education
University of Maine, Orono, Maine

Mrs. Marion Bagley
Career Education Consultant
State Department of Education and Cultural Services
Augusta, Maine

Mr. Phil Gonyar
Assistant Superintendent for Curriculum
Bangor Public Schools
Bangor, Maine

Mrs. Nona Thompson
Career Education Coordinator
Bangor Public Schools
Bangor, Maine

Mr. George McLeod
Assistant Superintendent and Director Project REVAMP
South Portland Public Schools
South Portland, Maine

Mr. Fred Friese
Assistant Director, Project REVAMP
South Portland Public Schools
South Portland, Maine

Project Assistants, College of Education, University of Maine at Orono
Betty Ann Brown
Priscilla Hutchins
Linda Speed
Steve Thompson

PRESENTED BY

COLLEGE OF EDUCATION

AND
THE STATE DEPARTMENT OF EDUCATIONAL AND CULTURAL SERVICES, AUGUSTA
IN COOPERATION WITH
THE BANGOR PUBLIC SCHOOL SYSTEM
THE SOUTH PORTLAND PUBLIC SCHOOL SYSTEM
WITH SUPPORT FROM
THE UNITED STATES OFFICE OF EDUCATION
OFFICE OF CAREER EDUCATION

Purpose

The College of Education, University of Maine at Orono, and the State Department of Educational and Cultural Services will conduct a program to install a comprehensive career education demonstration model for the State of Maine. Through the combined efforts of state department, local school, and university personnel, the effectiveness of career education will be demonstrated by involving community, business-industry, and parents in formulating an effective career education policy. The Bangor Public Schools will serve as a demonstration site for Northern Maine with the assistance of experienced career educators from South Portland Public Schools.

Objectives

The following objectives will be addressed in this project:

(a) To demonstrate a comprehensive, integrated, and coordinated career education program in the Bangor Public School System, Bangor, Maine.

(b) To demonstrate the procedures for initiating career education at the University/college level.

(c) To demonstrate procedures for initiating a Maine State Plan for Career Education.

Each of the above objectives are supported by specific sub-objectives, staff in-service training, and community involvement.

Methods for Implementation of Program

To implement a comprehensive career education program, the following activities will be initiated:

(a) A series of workshops, courses and individual classroom support for teachers in the Bangor Schools in the area of career education.

(b) A series of workshops to train University/college teacher educators in the philosophy, concepts, and methods of career education.

(c) The training of university-based career education interns and retired resource persons from the community to assist in the implementation of the project.

(d) Evaluation of the impact of the comprehensive career education program by students (K-12), teachers, university and state department personnel conducted by the University of Maine at Orono staff.

(e) Technical assistance provided by South Portland Public School staff in implementing a model career education program in the Bangor School System.

Significance of Project

This project affords Maine educators and citizens a unique opportunity to establish a model for career education in Northern Maine. With the cooperation of Bangor Public School, South Portland Public Schools, University of Maine at Orono and the State Department of Educational and Cultural Services, guidelines for implementing career education in the State of Maine will be established. Career education concepts will be integrated into existing curricula and training will be conducted on a teacher-teacher level through utilization of educators from the South Portland School System. At the University/college level, 100 teacher-educators will be trained in career education to facilitate the development of preservice training of future Maine teachers.

APPENDIX P

PRESS RELEASE

Bangor School System Career Education In-Service Program
November 5, 1975 8:00 a.m. - 3:00 p.m.
Conference Room, Harlow Street School, 183 Harlow Street

First Workshop of Two Dealing with Career Awareness

The third career education workshop will begin with Dr. Charles Ryan, Professor of Education at the University of Maine at Orono, explaining Donald Super's theory dealing with career development and career choice. Following a discussion period, teachers from the South Portland career education project will demonstrate the use of career awareness activities to small groups of workshop participants. In the afternoon, the South Portland staff will familiarize the group with information and educational materials available in career awareness.

The process through which a school child would progress in achieving career awareness would be this:

Grades Kindergarten through Six

The child would experience activities which would make him realize the vast number of occupations available, the life styles associated with occupational groupings, and his own particular feelings toward the various occupational groups.

Grades Seven through Nine

Once aware of the variety of occupations, the student would explore in depth those occupational areas which particularly appeal to him.

Grades Ten through Twelve

Depending on his particular circumstances the student would either select the further educational path necessary for reaching his career goal or become trained in a specific occupation.

UNIVERSITY OF MAINE *at Orono*

Center For Career Education
College of Education

104 Shibles Hall
Orono, Maine 04473
207/581-2431

August 25, 1976

I.D. #60

Occupational and Adult Education Br.
Grant and Procurement Management
Division
U.S. Office of Education
400 Maryland Avenue, S.W.
Washington, D. C. 20202

Gentlemen:

Attached are three copies of the final report for Grant number G007502355 Comprehensive Career Education Project. The fiscal report for this project will be completed in mid-September, 1976 and forwarded at that time.

Cordially,

Charles W. Ryan

Charles W. Ryan
Professor of Education

CWR/rn

Enclosure